Scientific and Medical
Books, and Minerals.
DR. A. E. FOOTE,
Philadelphia, Pa.

PHILADELPHIA

No. 23

For the use of the
Reading Room
of
Medical Department of
Pennsylvania College

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OUTLINES

OF

LECTURES

ON

MATERIA MEDICA AND BOTANY,

DELIVERED IN

JEFFERSON MEDICAL COLLEGE,

PHILADELPHIA.

BY WILLIAM P. C. BARTON, M. D.

VOLUME II.

PHILADELPHIA:

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EASTERN DISTRICT OF PENNSYLVANIA, to wit:

BE IT REMEMBERED, That on the sixth day of Oc-
(L. S.) tober, in the fifty-second year of the Independence of the United States of America, A. D. 1827, WILLIAM P. C. BARTON, M. D. of the said District, hath deposited in this office the Title of a Book, the right whereof he claims as author, in the words following, to wit:

"Outlines of Lectures on Materia Medica and Botany, delivered "in Jefferson Medical College, Philadelphia, by William P. C. Bar-"ton, M. D."

In conformity to the act of the Congress of the United States, intituled "An act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies, during the times therein mentioned." And also to the act, entitled "An act supplementary to an act, entitled 'An act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies, during the times therein mentioned,' and extending the benefits thereof to the arts of designing, engraving, and etching, historical and other prints."

D. CALDWELL, *Clerk of the*
Eastern District of Pennsylvania.

Penn.

Penn'a. Med. College Reading Room.
Penn'a. Med. College Reading Room.

PREFACE.

THOUGH the arrangement adopted in this volume, is sufficiently plain to the student, it may not be amiss to make a few remarks on the advantages it presents, for acquiring a knowledge of the subjects of Materia Medica. It will be perceived, that a reference is made, under each number, to the specimens of the articles treated of under it, which belong to my Cabinet of Materia Medica and Botany in Jefferson College. This cabinet is the result of a gradually increased collection of interesting specimens, and fine figures of all the medicinal plants of the Materia Medica, during eleven years that I have been a Professor, and Teacher of Botany, Vegetable Materia Medica, and Vegetable Toxicology, in the University of Pennsylvania. Many of the more rare specimens have been contributed by my eminent correspondents, Professors in the different Universities of the Continent of Europe; especially by Professor Mertens of Bremen; Professor Schrader of Gottingen; Professor Sprengel of Halle; Professors Desfontain and Thoüin of Paris; and many highly valuable specimens from Professor Horneman of the University of Copenhagen, whose liberality has been usefully propitiated by my friend, his excellency, Mr. Pedersen, late minister from Denmark to the United States. To my pupils, in the University of Pennsylvania, during the period mentioned, the Cabinet is also indebted for many; and for some rare specimens from the West Indies, and from Louisiana, it stands indebted to my assiduous pupils, George Terrill, M. D. and Henry W. Bassett, M. D. Surgeons of the United States Navy; two gentlemen who have contributed to science, by pursuing assiduously the official recommendation given to the junior medical officers of the service, by the Hon. Samuel L. Southard, Secretary of the Navy, to avail themselves of the opportunities their continuance in this city during a respite from duty, afforded them, of cultivating the Science of Botany; a recommendation, being one of the numerous acts of that distinguished director of the navy, which has elevated the dignity, respectability, and usefulness, of its Medical Corps.

The whole cabinet, I venture to believe, when arranged, which from its extent has heretofore been impracticable, owing to a want of suitable apartments, will constitute the most complete collection of Materia Medica and Botany in the United States. For its reception, together with the excellent and rapidly increasing Cabinet of Jacob Green, M. D. Professor of Chemistry in Jefferson

College, and the Anatomical specimens, an extensive gallery is provided in the new Jefferson Medical building, now erecting in Tenth, between Chestnut and Walnut streets. This gallery will be a continuous room, forming a right angle, on the front and south aspect of the edifice; each angle of which measures 47 feet, by 18 feet in height, and about 12 or 13 feet in width; being well lighted from the main, and small street, on which the building stands. As far as the references of this volume go, it will be an explanatory catalogue of the articles of the cabinet—for the residue, a catalogue will be printed, by the session of 1828. For my own department, I can confidently say, that no pains nor expense will be spared in the arrangement and enrichment of this Cabinet, to render it a mean of useful instruction to the numerous students who have encouraged our new institution, which has hitherto met with so much cheering encouragement,* (particularly this session,) by intelligent and educated youth, from South Carolina, Virginia, Maryland, Ohio, Mississippi, Tennessee, Alabama, Delaware, Pennsylvania, New-Jersey, New-York, Rhode Island, Connecticut, Massachusetts, Vermont, Maine, and even the West Indies. Our class contained, last year, but *three* students from Virginia; already, at this early period, when the regular course has been but five days commenced, we have matriculated near *thrice* that number, from that State—and it is not doubted, that that part of our Union which has hitherto sent so large a number of Medical Students to our city, will in future bestow a good proportion on that School, which bears the name of the illustrious natal patriot of the state—a patriot of whom it has so much reason to be proud.

This volume contains a designation of those articles of the Materia Medica, which, from their novelty, uninvestigated properties, or interest, would form useful subjects for inaugural Theses. In reference to these, I have the pleasure to mention, that the Medical Faculty of Jefferson College, has determined to award, this year, an equivalent to $90 for the best inaugural Latin thesis, which shall be adjudged excellent, from its pure latinity, and the able treatment of the subject. For the next best, an equivalent to half that sum, together with certificates of this honourable distinction in the class.

PHILADELPHIA, *Nov'r.* 12*th*, 1827.

* Last session, the aggregate number of our class, was less than one-fourth of the number reputed to resort to the University. This session, according to the acknowledged numbers of that school, we have more than one-third—and this is but the third session of the existence of our College! We have therefore every reasonable ground for calculating nearly on an equal division with that celebrated School, next session—and in one more session, a fair moiety.

OUTLINES OF LECTURES.

ABI—ACA

No. 1.—Abietis Resina.

Synonym, *Pinus abies*, which see.

No. 2.—Absinthium, *wormwood.*

Synonym, *Artemesia absynthium*, which see.

No. 3.—Acacia, the generic name of an assemblage of pinnatified plants, of which two species furnish drugs of commerce and medicine—gum Arabic and gum Senegal.

Acacia. Species plantarum of Willdenow, Vol. 4. page 1085, 23d class, order 1st of sexual system of Linn. viz. *Polygamia, Monoicia.* Natural order, *Lomentaceæ* of the same author. Natural order, *Leguminosæ* of Jussieu.

Genus No. 1902 of Willdenow, as above, with the following characters:

Hermaphrodite. *Calyx* five-toothed. *Corolla* five-cleft, or formed of five petals. *Stamens* 4–100. *Pistil* 1. *Legume* bivalve.

Male. *Calyx* five-toothed. *Corolla* five-cleft, or formed of five petals. *Stamens* 4–100.

That section of the genus which embraces species that have *Leaves bipinnate, stipular thorns or prickles, elongated spikes*—contains species No. 73, *Acacia Catechu. Catechu*—formerly *Terra Japonica.* That section which embraces species with leaves bipinnate, stipular thorns and globular spikes, contains species No. 87, *Acacia Vera*, Acacia or Egyptian thorn, yielding gum Arabic.

OFFICINAL. Catechu extractum. *Lond.* Acaciæ extractum Catechu. *Edin.* Catechu: extractum e ligno. *Dublin.* Pharmacopeia, *United States.* *Extract of Catechu.*

Wm. P. C. Barton's Cabinet of Materia Medica and Botany, in Jefferson College—specimens No. 1 and 2. Coloured figure of the plant, small series, frame No. 3, under SYNONYM Mimosa Catechu.

No. 73 is now under notice, as yielding Catechu; derived, according to Kerr, from two Oriental words—*cate*, a tree, and *chu*, juice.

The tree which yields Catechu grows abundantly in the woods of Kanhana, in Hindostan; seldom exceeds twelve or fourteen feet in height, covered with a rough thick bark, and towards the top dividing into numerous branches, on the younger of which are placed from fifteen to twenty pairs of pinnæ, about two inches long, each having near forty pairs of hairy follicles; flowers, hermaphrodite and male; fruit, a lanceolate, compressed, and smooth pod. Flowers in June.

Two sorts of Catechu—Bengal and Bombay; the first being the produce of Canara, the second of Behar. Little chemical difference, according to Davy—either nearly soluble in the mouth; their solution in water inodorous, and slightly red in tincture of litmus. From 200 grains Bombay Catechu, Davy obtained 109 tannin, 68 extractive matter, 13 mucilage, 14 impurities; obtained by boiling and evaporation of the decoction of the brown coloured and inner part of the wood of the Acacia Catechu. Taste more or less bitter and astringent, with sometimes mawkish sweetness.

Besides the true Catechu, there are sold in the bazaars of Lower India, two other substances, similar in properties to it, and used by the native and European practitioners for the same purposes. The first is called *Cuttacamboo* in Tamool—the second, *Cashcuttie.* They are two different extracts from the nut of the betel-nut tree, (*areka catechu,*) which see.

The term *Terra Japonica,* or *Japan earth,* formerly appropriated to this drug, originated from the supposition that it was an earth from Japan. It is called *Cutt,* by the Hindostanese; *Cutch,* by the English; by different authors, *Chaath, Cate, Cachou, Cachoze.*

QUALITIES. Pale Catechu—in small square cakes, Sienna red, light, friable, lamellated, fracture rough; first taste sweetish, after taste bitterish and astringent;

specific gravity, 1.39. Dark Catechu—heavier than the pale; specific gravity, 1.28; more austere and bitter; in other respects, alike. Both kinds often adulterated with sand and other impurities.

MEDICINAL PROPERTIES AND USES. A valuable astringent—the brown containing most tannin, preferable. Used in dysentery and diarrhœa, alvine and uterine hæmorrhages, leucorrhœa, obstinate catarrhal affections. Locally, to spongy gums and aphthæ of mouth and fauces—for relaxed uvula, occasioning teasing cough—as a dentifrice. Alkaline salts destroy its astringency; metallic salts, and solution of isinglass, form with it insoluble compounds. Dose, grains x. to ℈j. or ʒi.

OFFICINAL PREPARATIONS—

1. Infusum Catechu, } London and Edinburgh.
2. Tinctura Catechu. }
3. Electuarium Catechu compositum. Edinburgh and Dublin.

I recommend the following formulæ:—

℞ Catechu, ʒiv.
Alum ʒix.
~~White resin,~~ ʒiv.
Olive oil, fʒx.
Water, q. s.
} Mixed into an ointment, used in India as an application to ulcers.

No. 1.—Pulv. Cretæ, gr. xij.
—— Opii, gr. ¼
—— Extract. Catechu, gr. xv.
} Made into one powder—to be taken, in diarrhœa from gastric acidity, as often as may be requisite to suppress it.

No. 2.—Pulv. gallarum, gr. x.
Tinct. Catechu, fʒss.
Tinct. cardamon. comp. fʒss.
Syrup of cont. aurant. fʒj.
} Made into a draught.

No. 3.—Mistura Cretæ, fʒiss.
Tinct. Opii, drops xv.
Tinct. Catechu, fʒj.
} in same cases as No. 1.

No. 4.—Infu. Cuspariæ febrifugæ, fʒj.
Tinct. Catechu, fʒj.
Pulv. Ipecac. gr. v.
} Made into a draught.

No. 4.—ACACIA VERA.

Synonym, Mimosa nilotica.

OFFICINAL. Acaciæ gummi, *Lond.* Acaciæ Arabicæ gummi, *Edin.* Gummi Arabicum. *Dublin.* Acacia Gum, or Gum Arabic.

Cabinet Mat. Med. & Bot. Jeff. Col. Specimen No. 4, called best (opt); Nos. 5 and 6, common; No. 7, sophisticated; No. 8, coloured figure of the plant, small series.

The small tree yielding this drug, is common in nearly every part of Africa. The gum exported from Barbary to England, is from trees growing in the Alas mountains, and at Blod-el-jerreede. Stem crooked, bark grey, that of branches tinged with purple; leaves alternate, bipinnate, composed of several pairs opposite *pinnæ*, a small gland on the common petiole, between the base of each pair, and having numerous pairs of narrow, elliptical, smooth leaflets. *Capituli* consisting of hermaphrodite and male flowers, supported on slender peduncles (4 or 5 together) from the axils of the leaves. *Calyx* small, bell-shaped, five-toothed. *Corolla* five-cleft, segments narrow, yellowish. *Filaments* numerous, capillary, *anthers* roundish, *germen* conical, *style* slender, *stigma* simple. Pods three or four inches long, half an inch broad; seeds several, flattish, brown. They yield a reddish dye.

The gum exudes spontaneously from the bark of the trunk and branches, in a semi-fluid state; becomes hard and transparent by exposure to air. Collected in December. According to Jackson, it is a diseased product. He says, the most sickly trees, in the hottest seasons, yield the most; and in these seasons, it is gathered in July and August. Little is obtained in moist, cool, or mild summers. I cannot acquiesce in this opinion, and account for the facts stated, by inferring that excessive heat is favourable to the excessive generation of the gum, which is a natural and not a diseased secretion. The elimination of a greater quantity than is consistent with the usual economy of the plant, by heat, naturally takes away some of the nourishing juices of the tree—hence it is sickly.

QUALITIES. In irregular shaped pieces, hard, brittle, semi-transparent: fracture semi-lustrous; neither fusible nor volatile; pale yellowish, white, or cream-white, when pure; insipid, inodorous, dissoluble in the mouth; specific gravity, 1.3161 to 1.4317; sophisticated with gum Senegal—may be known from it by the latter being in larger masses, of a darker hue, more tenacious, less soluble in the mouth, sticking to the teeth; also adulterated with *Bábuled Gând*, of

the Hindostanese, a gum brought from the East Indies, darker, less pure, and less soluble, than gum Senegal, and which is the product of Acacia Arabica, or Babul tree. Soluble in hot or cold water, and vegetable acids; insoluble in alcohol; triturated with fixed or volatile oils, and resins, renders them miscible with water; insusceptible of fermentation, owing to some lime it contains. Dr. Thompson found it to contain *gluten*—hence its very nutritive quality, as mentioned in therapeutic lecture on Demulcents.

Medical Properties. Referred by writers to demulcents; dissolved in the mouth, for cough; given in drink, in bowel diseases of children; in gonorrhœa, leucorrhœa; chiefly used in state of mucilage, and as a vehicle for medicines repulsive to water, in making pharmaceutical mixtures.

Officinal Preparations. 1. Mucilago Acaciæ, L. E. D. 2. Emulsio Mimosæ Niloticæ, E. Emulsio Arabicæ, D. 3. Mistura corn. ust. L. D. 4. Mistura Cretæ, L. D. 5. Mistura Moschi, L. 6. Confect. Amygdal, L. 7. Pulv. Cretæ co. L. 8. Pulv. Tragacanth. co. L. 9. Trochisci Carbonat. calcis. E. 10. Troch. Glycrrh. Glab. E. 11. Troch. Glycrrh. Glab. cum opio. E. 12. Troch. Gummos. E.

No. 5.—Acetosæ Foliæ. Leaves of Rumex acetosæ, or sorrel dock, which see.

No. 6.—Acetocella. The plant called Oxalis acetocella (which see) or wood sorrel, yielding oxalic acid, in form of super oxalate of potass.

No. 7. Acetum, L. E. Acetum Vini, D. Vinegar.

Qualities, and economical use, well known.

Medicinal Properties and Uses. Is refrigerant, diaphoretic, diuretic, anti-narcotic; externally, slightly stimulant and astringent. Used to acidulate diluent drinks and ptisans; as a glyster, in obstinate costiveness; externally, as a fomentation or lotion, to burns, bruises, sprains, and chronic ophthalmia; diluted with water, used to clean the eye of small particles of lime. In vapour, it is used in sore throat and catarrh. Dose, ℥i to ℥ii—in glysters, f℥i to f℥ij.

Officinal Preparations. 1. Acidum aceticum. L. E. D. 2. Acidum aceticum forte. E. D. 3. Syrupus aceti. E.

No. 8.—Acetum Colchici. L. Vinegar of meadow saffron.

Cabinet specimen, Jeff. Coll. No. 9.

Vinegar dissolves the active properties of the bulb of Colchicum.

Qualities and medical uses—see *Colchicum Autumnale.* Dose, f℥ss to f℥ij, in any mild liquor.

No. 9.—Acetum Scillæ. L. E. D. Vinegar of Squill.

Cabinet specimen, Jeff. Coll. No. 10.

An ancient preparation of Squill, depositing, when long kept, a precipitate consisting of *citrate of lime* and *tannin.* This does not, as is often supposed, deteriorate the medicinal value of the preparation. See *Scillæ maritima.*

No. 10.—Acetum Aromaticum. E. Aromatic vinegar.

*Thieves' Vinegar.**
Marseilles Vinegar.
Le Vinaigre de quartre voleurs.

Cabinet specimen, Jeff. Coll. No. 11.

Is a solution of essential oils and camphor, in vinegar—for the formula, see Edinburgh Pharmacopeia, and a similar preparation in the French Codex, consisting of an acetic infusion of various aromatic herbs and camphor, under the above French name.

No. 11.—Acetis Hydrargyri. E. Acetas Hydrargyri. D. Acetate of mercury.

Cabinet specimen, Jeff. Coll. No. 12.

Qualities. In small, flakey, silvery-white crystals, of an acrid taste, composed of acetic acid and oxyd of mercury; insoluble in alcohol—soluble in hot, sparingly in cold water.

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* A supposed prophylactic against contagious fevers, so named from the confession of four thieves, who obtained their reprieve, when arrested for plundering, with perfect security, the dead bodies of those who died of the plague of Marseilles, by confessing that their preservation from contagion was owing to their use of this vinegar.

MEDICINAL USES. In pills, dose gr. j. for old venereal affections, particularly of the skin; a solution of gr. ij, in f℥ij rose-water, used as a cosmetic. Keyser's anti-venereal pills consist of this mercurial salt, triturated with manna.

No. 12.—ACIDUM ACETICUM—(impurum?) *Fortius.* L. Strong (impure?) acetic acid. Specific gravity, 1.046. Lond. Pyroligneous acid—e ligno stillatum.

Cabinet specimen, Jeff. Coll. No. 13.

Acetic acid distilled from wood, or pyroligneous acid—known in England in 1661, under the name of "sour spirit," or "vinegar of boxwood;" within a few years past, introduced into use. Obtained by decomposing wood, in large iron cylinders, by heat—rises gaseous, and becomes condensed into a liquid by passing through cool pipes.

QUALITIES. Colourless, limpid; sharp agreeable taste, and penetrating vinegar-odour, with some empyreumatic aroma; five or six times stronger than common vinegar; very volatile; makes a white opaque smoke, which is a dry acetate, when its vapour is allowed to rise near carbonate of ammonia; similar in chemical properties to diluted pure acetic acid; forms a colourless salt when saturated with potass, and a colourless mixture with sulphuric acid.

MEDICAL PROPERTIES AND USES. Diluted with distilled water, may be used as distilled vinegar is. Stimulant; powerfully antiseptic—hence its economical use, in preserving animal and vegetable substances—might be used for preparations of morbid anatomy.

No. 13.—ACIDUM ACETOSUM, forte E. *Acidum aceticum.* D. Concentrated acetic acid—radical vinegar.

Cabinet specimen, Jeff. Col. No. 14.

Differs from distilled vinegar, in being more concentrated and pure. Obtained from decomposition of acetic salts by sulphuric acid.

QUALITIES. Pungent, acrid, volatile; takes fire, when heated in open air; more solvent than distilled vinegar, dissolving camphor, essential oils, and resins—dilution precipitates them again. With alcohol, it forms a kind of ether: united with water in any pro-

portion, evolves caloric during the combination; corrodes every thing but gold, platina, glass, and earthenware.

Henry's aromatic vinegar is an acetic solution of camphor, oil of cloves, lavender, and rosemary. An extemporaneous similar preparation may be made, by ℥i acetate of potass, M. xx. of sulphuric acid, and a few drops of some fragrant essential oil. Both useful, when applied to the nose in fainting, &c.

No. 14.—Acidum Citricum. L. Acidum citricum crystallis concretum. D. Citric acid. Acids of lemons, limes, &c.

Cabinet specimen, Jeff. Coll. No. 15.

Qualities. Pure, is in white, semi-transparent, persistent, rhomboidal prisms—or two four-sided pyramids, joined at their bases. Inodorous; intensely acid, sub-caustic taste; soluble in cold and hot water: f℥i, cold, dissolves ℥x—same quantity, boiling, dissolves ℥ij. One ounce of the crystals, dissolved in one pint water, equivalent to one pint lemon-juice; if not carefully kept, the solution undergoes spontaneous decomposition: combines with alkalies, earths, and metallic oxides, forming citrates of them. Decomposed by sulphuric and nitric acids. Sophisticated with tartaric acid, which may be detected by adding to the solution muriate of potass, or saturating it with carbonate of potass, when an insoluble supertartrate, in small brilliant crystals, will be formed. Adulterated also with citrate of lime, which may be known by dissolving the crystals in water, salinating the solution with ammonia, and adding to it some oxalate of that substance, which will precipitate it instantly.

Medical Properties and Uses. One ounce to a pint of water, used as a substitute for recent lemon-juice, in scurvy, both as a prophylactic and remedy. Though not equal to that juice in this disease, it is equally good for making the effervescing draught, with carbonate of potass. Used also in all affections in which fresh lemon juice is proper. A solution of ℥j, in a pint of water, sweetened with sugar that has been rubbed on fresh lemon peel, is a grateful lemonade, in febrile and inflammatory complaints.

Dr. Paris has given the following table of equivalent proportions of concrete citric acid and lemon juice, necessary for neutralizing alkaline salts:—

Citric Acid.	*Lemon-Juice.*	*A scruple of Alkalies.*
gr. x.	fʒij.	Carbonate of potass.
gr. xv.	fʒiiij.	Sub-carbonate of potass.
gr. xxv.	fʒvij.	Sub-carbonate of ammonia.

Citric acid, though called the juice of lemons, is contained in many other fruits, from which it may be obtained by the same process as from lemons or limes: viz. the cranberry, bird cherry, solanum dulcamara, rosa canina or Hep, or fruit of wild briar. It exists in combination with malic acid, in the strawberry, raspberry, currant, bilberry, whortleberry, hawthorn, black cherry, &c.; and in small proportion, in the berberry, elder-berry, sloe, service, plumb, &c. This accounts for the well-known fact, that the juices of these fruits soften and remove tartareous incrustations on the teeth. A recollection of the existence of this acid in the foregoing common fruits, will also enable the practitioner to direct or forbid them, in disease or convalescence.

No. 15.—Acidum Hydrocyanicum; *Acidum Prussicum.* Hydrocyanic acid. Prussic acid.

Cabinet specimen, Jeff. Coll. No. 16.

The most vehement, certain, and destructive poison known. This deleterious liquid was first introduced to somewhat general employment, as a subject of materia medica, in the year 1815, by the London practitioners—and since, by those of other places in Britain and on the Continent, and in the United States. This remark has reference only to the acid in its simple, separate form—for the deleterious principle of which it consists, was long known to exist in the distilled water of the *Lauro Cerasus*, as appears from the murder of Sir Theodosius Broughton by means of it, and also the suicide committed, in 1782, by Dr. Price, of Guilford, in vexation of spirit at his inability to prove the truth of his profession of a power to convert mercury into gold, before a tribunal competent to decide on the fact. He put a period to his existence, on the day before the appointed time of trial, by drinking laurel water.

The medical employment of this article was also known long since. Linnæus, in the Ammœnitates Academicæ, published in the year 1765, mentions

that laurel water was used frequently as a remedy for pulmonary consumption, in Holland.

Other vegetables contain the acid, besides *Lauro Cerasus*, or cherry laurel It exists in bitter almonds, the leaves of the peach-tree, the kernels of the fruit of this and many other plants of the family, in the pips of apples, and in the bark of the *prunus padus*, or bird cherry. It exists also in the bark of the *prunus Virginiana*, and *prunus serotina*, or wild cherry of this country.*

Qualities. Liquid, transparent, and colourless at the ordinary temperature, but occasionally yellowish: first taste cooling, after taste peculiar, bitterish, acrid, irritating; slightly reddens tinct. turnsole; odour powerful, resembling that of bitter almonds, insupportable, unless mingled with a large quantity of air. Exposed to light and air, spontaneously undergoes decomposition, when the above properties are lost. Very volatile; boils at 79° F.—congeals at 59° F. When a few drops are put on paper, it quickly evaporates, and in the generation of cold, the residue is crystallized—a unique property, distinguishing it from all other liquids. Soluble in alcohol—very little so in water; agitated with ten or twelve times its volume of that fluid, it re-collects on its surface, like oils. "Left to cool in vessels, it is decomposed in less than an hour, and rarely preserves its integrity more than a fortnight." *Magendie.* It consists of a peculiar gaseous, highly inflammable compound of carbon and nitrogen, called *Cyanogene*, united with hydrogen as the acidifying principle—hence it is called hydrocyanic acid. The medicinal preparation contains a small portion only of the concentrated compound. According to Magendie, the acid, prepared according to Sheele's method, is of irregular medicinal power; and he recommends Gay Lussac's acid, diluted by six times its volume, or 8.5 times its weight, of distilled water, for medical purposes: this mixture Magendie calls medicinal prussic acid. Dr. Ure proposes that the specific gravity shall designate that fit for medicine; and after comparative experiments of the gravity of the acids obtained by different processes, he states that the acid usually prescribed is of specific gravity, 0.996 or 0.997.

Effects. Hydrocyanic acid, in a sufficient quantity, instantly destroys life in man and animals. The ve-

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* The only mineral substances in which this acid has been found to exist, is the *Fer Azure* of Haüy, and a new substance found accompanying Welsh Culm.

locity with which it acts, probably destroys nervous energy. It has the property of extinguishing general sensibility, without injuring respiration and circulation. Animals have been found to breathe and suffer no impediment in circulation, for some hours after muscular irritability has been extinguished.

Medical Properties and Uses. Referable to sedative narcotics. Efficacious in tracheal phthisis, according to Mr. A. Todd Thompson: has been commended by Granville, in tubercular phthisis—by Brera, in pulmonary inflammation—by Magendie, in all cases of augmented irritability of the pulmonary organs, as nervous chronic coughs, asthma, whooping cough—by Thompson and Elliotson, in dyspepsia; the former recommending it to be combined with tonics, in this affection accompanied with gastric acidity, with heat and soreness of the tongue: he says, that in these cases, "it reduces the morbid irritability of the stomach, and thereby enables the juices of that organ to be more slowly secreted, and of a more healthy character." Thompson appears to have been the first who used it in gastric affections. It has proved serviceable in uterine hæmorrhages, dysmenorrhœa, and hæmoptisis. In England, it has been used in cases of hectic cough—in Italy, to calm the irritability of the uterus, even in cases of cancer, and to moderate and regulate the inordinate action of the heart in sthenic diseases. It has been used in chronic rheumatism and mania, in the Pennsylvania Hospital, with advantage. As a local remedy, it has been serviceable in allaying irritation of the skin, attending on impetiginous affections. Internally, it may be administered in distilled water, camphor mixture, or some vegetable infusion. It has been proposed, instead of using the separated acid, to employ some vegetable in which the acid naturally resides, by an association of physicians, surgeons, and naturalists of Florence—as the essential oil of *Prunus Lauro Cerasus*. They recommend olive oil as the best vehicle, in the proportion of twelve drops of the essential oil to one ounce of the oil. Others prefer laurel water, (which see.)

Formulæ—

No. 1.—Mistura Acidi Hydrocyanici. Mixture of Prussic Acid—Magendie's Pectoral.

Medicinal Prussic Acid,	gr. 59.07 troy
Distilled water	℔1
Pure sugar	oz. 1½

Mixed, and to be shaken when used.

Dose, a desert-spoonful morning and evening—may be increased to 6 or 8 spoonfuls in 24 hours.

No. 2.—Potio Acidi Hydrocyanici. Potion of Hydrocyanic Acid—Magendie's Pectoral Potion.

Infusion of ground ivy, (*Glechoma hederacea*,)	2 oz.
Medicinal Prussic Acid,	15 drops
Syrup of Marsh Mallows,	1 oz.

Mixed and shaken, before use.

Dose, a desert-spoonful every nine hours.

No. 3.—Syrupus Acidi Hydrocyanici—Hydrocyanic Syrup.

Clarified syrup,	lb1
Medicinal Prussic Acid, gr. 59.07 troy	

To be added to common pectoral syrups, and used as they are.

No. 4.—Lotio Acidi Hydrocyanici—Hydrocyanic lotion

Hydrocyanic acid,	f ℥iv
Rectified spirit of wine,	f ℥j
Distilled water,	f ℥xss.

Used by Mr. A. T. Thompson, as a wash for impetiginous affections.

No. 16.—Acidum Benzoicum. L. E. D. & Phar. U.S. *Benzoic Acid.* Flowers of Benzoin.

Cabinet specimen, Jeff. Coll. No. 17.

A preparation of gum Benzoin, which is the produce of *Styrax Benzoin*, or Benjamin tree of Sumatra.

Qualities. Inodorous, when entirely pure; very agreeably fragrant and aromatic, as it is found in the shops, under the name of flowers of Benzoin; in this state, it contains some oil, on which its odour depends—by dissolving it in alcohol, and precipitating it by water, this is got rid of. It is, however, in its impure state altogether, that it is employed for medical purposes. Taste pungent, sweetish, acrid, and acidulous. It is in minute acicular crystals and flakes, soft to the touch, of a beautiful white hue and saline lustre, and not pulverulent. Specific gravity, 0.657. In a strong heat, it burns with a white flame—in a lower heat, it melts, and emits an acrid suffocating vapour. Soluble in twenty-four times its weight of boiling water; but is nearly all deposited on cooling, say nineteen twentieths. With alkalies, earths, and metallic oxides, it forms salts, called benzoates of each, which have never been applied to medical purposes. *Benzoic acid* exists in other vegetables besides the *Styrax*—in the *Dipterix Odorata*, or Tonca bean, on the surface of which it is often seen crystallized.

Medical Properties and Uses. A stimulant and expectorant, as all the balsams and balsamic products are. It is chiefly used as an ingredient in the composition of other medicines, particularly common Paregoric, which is never agreeable without it, though it is sometimes left out. As benzoic acid is in some degree pectoral, it is not improbable that it has its share in the peculiar and agreeable effect of that mixture, in catarrhal diseases. It also enters into the *Tinctura Opii Ammoniata*. E.

No. 17.—Acidum Muriaticum. L. E. D. Phar. U.S. Muriatic acid.

Synonyms, Hydro-chloric Acid, Hydro-muriatic Acid.

Cabinet specimen, Jeff. Coll. No. 18.

Qualities. A straw-yellow liquid, of pungent odour, and intensely sour, caustic taste; emits white, suffocating fumes when exposed to the air, and corrodes animal and vegetable substances; forms muriates, with alkalies, earths, and metallic oxides. The liquid acid in use is a solution of muriatic acid gas in water When of specific gravity 1.16, according to Davy, it contains 32.32 per cent. of the gas, which is a compound of *chlorine* (oxy-muriatic gas) and hydrogen, in equal volumes.

Medical Properties and Uses. Tonic and antiseptic; used in typhous fevers* and cutaneous eruptions—in gargarisms, for ulcerated sore throat, and scarlatina maligna; highly diluted, as an injection for gonorrhœa; was supposed a cure for syphilitic affections—Pearson has opposed this notion: he says, by its salutary effects on the stomach and general health, "it is a medicine capable of ameliorating the appearance of venereal ulcers, and of restraining for a time the progress of the disease, where it is desirable to gain a little time, previously to the entering on a mercurial course." Dr. Paris says, that during several years' extensive practice in the Westminster Hospital, he uniformly exhibited it with success, in the most malignant cases of typhus and scarlatina. He says also, that after a copious evacuation of the bowels, he found

* Professor Reich was rewarded by the King of Prussia with a pension, for his assumed discovery of the efficacy of this acid in camp fevers.

it very efficacious in preventing the generation of worms, administering it in a strong infusion of quassia as a vehicle. This acid has been used as an antilitic. The antiseptic virtue, above noticed, has long been known. Some strong facts on this point are related by Sir Wm. Fordyce. As a disinfecting agent, the acid has been highly commended. It appears, however, too acrid and oppressive, if not suffocating, for apartments inhabited, as the wards of hospitals, &c. It is better fit to disinfect recently occupied cells of prisons or hospitals, wards, dissecting rooms, &c. which have become foul from putrefactive animal or vegetable matter, or from previous animal effluvia without ventilation, or from previous contagious disease. The muriatic acid gas may be evolved by pouring sulphuric acid on common salt.

This, in common with the other mineral acids, is preferable in cases where we wish a long-continued use of acids, since they are not liable to decomposition by the digestive process.

Dose, ♏v. to xx. frequently repeated, in some bland fluid, as barley water, gum Arabic water, or, if occasion require, in bitter tonic infusion. Pewter or leaden spoons must not be used for receiving it.

Formulæ—

No. 1.—Acidi muriatici, fʒss to fʒij to fʒiv of any kind of fluid, as a gargle in sore throat, &c.

No. 2.—Acidi muriatici, ♏viii } Mixed, for injection
Aq. fʒiv } in gonorrhœa.

No. 3.—Acidi muriatici, fʒi } a refreshing tonic
Decoct. Hordei, ℥j } in typhus fever
Syrupi, fʒij vel q. s. }

No. 18.—Acidum Nitro-Muriaticum. Nitro-muriatic acid.

If nitric and muriatic acids be mixed, a mutual decomposition takes place, of which water, chlorine, and nitrous acid are the results. This constitutes the nitro-muriatic acid, or *aqua regia* of the older chemists.

Medical Properties and Uses. A bath, acidulated with this mixture, has been proposed as a substitute for mercury, by Dr. Scott and Dr. James Johnson. The former strenuously recommends it in liver diseases, or all those affections which, in a tropical climate, spring from deficient, superabundant, and de

praved secretions of bile. In cases of this kind, he recommends that patients sit with the legs in a tepid nitro-muriatic acid bath, half an hour, or less, according to circumstances, every night, or every second night. He says, it produces its effects (after the first bath) in a few hours. "It purges—gives rise to the expulsion of dark-coloured fæces or bright-coloured bile; or bile of a brown, a green, or black colour, like tar mixed with oil. The pulse, in time, becomes quicker than natural, and a degree of restlessness takes place. These effects may be kept up for a number of days; they are often, however, much longer in appearing. When the bile is deficient in quantity, the effects are only known by the fæces returning by degrees to their natural colour, and by a gradual improvement of the health." It appears by his statement, that delicate or even strong people suffer temporary inconvenience from its use, and first perceive its beneficial tendency, a considerable time after they have given it up. It is said by Dr. Scott, that sponging the body with nitro-muriatic water has nearly the same effect as the foot bath—Dr. Johnson prefers the foot bath. The sponging, with this, of the thighs, legs, stomach, chest, or arms, for ten or fifteen minutes daily. Immersion of one hand or one arm, in delicate persons susceptible of the stimulus of this bath, may answer the purpose of sponging. Mr. Webster, surgeon of the 51st regiment, (English) speaks of its efficacy in infantile bilious diseases, as jaundice. The bowels must be kept open, in every case, by medicine, under the use of this bath.

Dr. Johnson gives these directions for preparing the bath: "Into a glass vessel, capable of holding a pint or more of fluid, put 8 ounces of water, and then pour in 4 ounces of the nitric acid of the London pharmacopeia, and 4 ounces of muriatic acid." One ounce of this nitro-muriatic solution to a gallon of warm water, will form a bath of medium strength, such as Mr. Astley Cooper prescribes. The proportion may be increased to an ounce and a half, or diminished to half an ounce, to the gallon, according to the age, strength, delicacy, or other peculiarity of the patient.

One drachm of the nitro-muriatic solution to a pint of warm water, is the quantity for sponging. My friend Dr. Hartshorne, an eminent practitioner of this city, has had some experience with this bath, and he some years ago spoke so favourably of it to me, as to induce me to use it in some cases. I am not able, with propriety, to give as yet a decided opinion

on its efficacy. I rather lean, however, until further experience with it, to the belief, that it is better suited to the diseases of a tropical climate, than to those of our own. I recommend it to your attention and trial.

No. 19.—Acidum Nitricum. L. E. D. Phar. U.S. *Nitric Acid.* Aqua fortis.

Cabinet specimen, Jeff. Coll. No. 19.

Qualities. A limpid fluid; specific gravity, 1.500; emits white fumes, of a suffocating odour; of an extremely acid taste; very corrosive, and tinges the skin yellow—this hue wears off, but is indelible by any application. It is decomposed, with violent action, by all combustibles, and mingled with volatile oils, inflames them. Employed as a pharmaceutical agent altogether.

No. 20.—Acidum Nitricum Dilutum. L. *Acidum Nitrosum Dilutum.* E. D. Diluted Nitric Acid.

Qualities. A less concentrated acid than the above, varying in strength according to the quantity of water directed by the different pharmacopeias—that directed by the present London pharmacopeia, is weaker than the D. and E.

Medical Properties and Uses. No. 19 is a tonic, antiseptic, and anti-syphilitic remedy. I have used it with great benefit in cutaneous affections with general debility, and particularly in some of a leprous character. I can also attest its efficacy, in certain cases of syphilis. This, very largely diluted, or No. 19 also freely diluted, so as to render the water slightly acidulous, forms a very refreshing, grateful, and tonic beverage, in fevers of low type. In doses less diluted, No. 19 has been found efficacious in chronic hepatitis, even after dropsical effusion had taken place; also in wasted and worn-out constitutions, as a gentle and certain tonic, without increasing too much the excitement of the system, during its immediate operation. It also restrains violent nausea and vomiting, and is an excellent tonic in dyspeptic disorders. In 1796, Dr. Scott published, at Bombay, some account of its efficacy in syphilis. he combined it with muriatic acid—three parts of the latter, with two of the nitric acid. It has been supposed by some, that it only checks the disease for a time and Dr. Pearson has averred, that it is no substitute for mercury in the venereal disease—an opinion in which I cannot acquiesce, having, in a very extensive practice, for many years, been in the habit of using the nitric acid

without the muriatic, and in numerous cases with entire success. It is said to lessen the action of mercury on the mouth and fauces, and hence, in broken-down constitutions, to be a useful tonic conjunctive with that medicine. Nitric acid itself, however, often salivates; and as the mouth and fauces give the first evidence of this effect, I can in no way perceive how it can lessen the determination of mercury to the same sites. Carmichael recommends its union with digitalis, in cachectic constitutions, afflicted with venereal. It is useful, conjoined with mercury, in obstinate ulcers of the legs, as I know from experience, accompanied by or existing without venereal taint. No. 20 has been nefariously used as a poison. It may be known by orange-coloured spots on the lips, chin, and hands of those who have taken it; and post mortem examinations have shown the same maculations in the stomach and intestines. Besides this, the mucous coat of the latter is converted into a fatty matter, and the former often perforated.

Dose of No. 20 is from ♏ x to ♏ xxx, in f℥iij of water, three or four times a day.

Formula— Acidi Nitrici dilut. f℥ij }
Aq. com. 0j. }

Mixed as a lotion for fetid ulcers yielding an ichorous discharge, and also in caries of bones.

No. 21.—Acidum Succinum. Edin. Succinic acid.

Cabinet specimen, Jeff. Coll. No. 20.

The process of this preparation is directed differently by the Edinburgh and the Dublin College: the discrepancy does not affect the article as a medicine. Obtained from amber.

Qualities. In minute triangular prisms—when pure, are white, translucent, shining; have a slight penetrating odour and taste; redden infusion of litmus; volatile, inflammable; soluble in twenty-four parts of water, at 60° F. and two parts of 212°, the greater part crystallizing as the water cools; soluble in alcohol, and sulphuric and nitric acid, without decomposition; combines with alkalies, earths, and metallic oxides, forming succinates.

Is adulterated by—1, tartaric acid, which is detected by carbonate of potass: 2, by muriate of ammonia, detected by nitrate of silver; 3, by sulphate of potass, detected by barytic water.

Medical Properties and Uses. Was formerly much used, externally, to stimulate punctured wounds, and as a powerful stimulant, internally, in tetanus; still used on the Continent of Europe.

No. 22.—Acidum Sulphuricum. L. E. D. & U. S. Sulphuric acid.

Synonyms, Oil of Vitriol, Vitriolic Acid.

Cabinet specimen, Jeff. Coll. No. 21.

Qualities. See Dispensatories.

Adulterated in the shops; ordinarily containing three or four per cent. of saline matter, which consists of about two-thirds sulphate of potass, and one-third sulphate of lead; does not affect the medicinal properties; it is used in doses of from five to eight drops, with a glass of water, for the same purposes as the following.

No. 23.—Acidum Sulphuricum Dilutum. L. E. D. & U. S. Diluted Sulphuric Acid.

Cabinet specimen, Jeff. Coll. No. 22.

The dilution variously directed by the different colleges. This preparation is more pure, and its dose can be better regulated, than No. 22.

Medical Properties and Uses. Antiseptic, refrigerant, astringent; useful for weakened digestive organs, colliquative sweats, diabetes, typhoid fevers, cutaneous diseases, internal hæmorrhages; was Sydenham's remedy for epistaxis and hæmoptisis; used, much diluted, as a collyrium, in chronic ophthalmia and obstinate gonorrhœa—dose, ♏ x. to xl.—in violent uterine hæmorrhages, and in malignant erysipelas, has been given to the extent of f℥i in twenty-four hours. May be given in the infusion of rose-leaves. The teeth must be guarded by sucking it through a quill. Locally applied, is a good gargle in ulcerated sore throat, and to check salivation.

Officinal Preparations. 1. Acidum sulphuricum aromaticum, called in Phar. U. S. Tr. sulphuric acid—this is the common elix. of vitriol. 2. Infusum rosæ compositum

Formula—

Cinchonæ lancifoliæ cort. contus.	℥ss
Aq. com.	f℥xvj
Made into a decoction—then add to the boiling liquor,	
Serpentaria radicis contus.	℥j
Spir. cinnamomi comp.	f℥iss
Acid. sulphurici. dilut.	f℥iss

Dose, in low fevers, two ounces every 4 or 6 hours

No. 24.—Acidum Sulphuricum Aromaticum.—Aromatic sulphuric acid. Elix. of vitriol.

Cabinet specimen, Jeff. Coll. No. 23.

This preparation contains ginger, cinnamon, and alcohol. It is erroneously considered to be an impure kind of ether, but is no more than a solution in alcohol of the acid and the above aromatics—it is absurdly denominated a *tincture*, in the Phar. U. S.

Qualities. Limpid; of a mahogany or red-brown colour; odour peculiar and aromatic; taste gratefully acid. Dose as in No. 23, in water or chamomile tea. May be used in all the affections in which No. 23 is employed. It is, indeed, the common way of giving sulphuric acid. The dose may be repeated three or four times a day. It is now commonly used in the mixtures of sulphate of quinine, to add excess of acid. These mixtures are therefore aromatic alcoholic super-sulphates of quinine.

No. 25.—Acidum Tartaricum. Tartaric acid.

Cabinet specimen, Jeff. Coll. No. 24.

Qualities. When crystallized, is white, semi-transparent, persistent in the air, inodorous, and very acid to the taste; primary form of crystal, an oblique rhomboid prism; melts if heated above 212° F.; boils at 250°, without losing its whiteness; readily soluble in water, the saturated solution not being liable to spontaneous decomposition; forms tartrates, with alkalies, earths, and metallic oxides; readily saturates alkalies, like citric acid; carelessly made, contains sulphuric acid, which can be discovered by adding muriate of barytes to the solution, when a precipitate, insoluble in excess of muriatic acid, will be thrown down.

This acid exists in *tartarum rubrum*, or red argol, obtained from red wines—in *tartarum album*, or white argol, which is an impure super-tartrate of potass, obtained from white wines; it is the essential salt of the grape, deposited during the fermentation of the wine, particularly in northern countries, where the fruit does not ripen thoroughly. It is contained in common cream of tartar—in soluble tartar, which is a tartrate of potass—in Rochelle salt, which is a tartrate of potass and soda—in tartar emetic—in the composition of one of the papers of Seidlitz powders. It is never used in crystals, but in solution with large quantities of water.

Medical Properties and Uses. Diluted and sweetened, forms a cooling and pleasant beverage, in fevers and bilious affections.

No 26.—Acipenser. Syst. Nat. Gmelin. 1483. Cl. 4. Ord. 6 Pisces, Chondropterygii. G. 134.

Species 2. *Acipenser Ruthenus*, the sterlet or small sturgeon
——— 3. *Acipenser Huso*, the beluga or great sturgeon.

Officinal. *Ichthyocolla.* Dub. Isinglass.

Cabinet specimens, Jeff. Coll. Nos. 25, 26, 27, 28.

These sturgeons are caught in the Volga, Danube, Urel, Oby, and Irtysh rivers, and the Caspian sea. Isinglass is prepared in Russia from the air-bladders, or sounds, of all the species of sturgeon—in Lapland, it is made from several species of perch—that made from the *beluga* is the best. Imported from Petersburgh in bales. There are four sorts—1, long staple—2, short staple—3, book, and 4, leaf. The finest kind is No. 1; is devoid of odour or taste; when good, it is in dry, whitish, nearly transparent, inodorous membranes.

Qualities. Insipid, inodorous; soaked in water, swells, softens, and becomes opalescent; according to Hatchett, 98 grains of 100 are soluble in water—the insoluble two grains consist of phosphates of soda and lime; ʒiij of No. 1, and warm water Oj, produce, on cooling, a strong opaline coloured jelly, which is a compound of pure animal gelatine and water—the jelly putrifies in a few days.

Medical Properties and Uses. The solution was formerly given in leucorrhœa and diarrhœa—now rarely used as a medicine; is nutritious, being one of the restorative dietetics, with the addition of sugar and lemon-juice; it is used in making English court-plaster.

No. 27.—Aconitum. Spe. plan. Willd. ii. 1235.

Cabinet specimens, Jeff. Coll. Nos. 29 and 30—coloured figure of the plant, frame No. 31.

Cl. 13, Ord. 3. *Polyandria Trigynia.* Nat. Ord. *Multisiliquæ*, Linn. *Ranunculaceæ*, Juss.

G. 1062. *Cal.* none; petals 5, the highest arched; *nectaries* 2, pedunculated, recurved; pods 3 or 5, with blue corollæ.

Spec. 8. A. *Napellus*, common monk's-hood. Lond. Edin. Med. Bot. of Woodville.

Spec. 9. A. Neomontanum. Dub.

Officinal, *Aconiti folia*, Lond. *Aconiti Napelli folia*, Edin. & U. S. *Aconitum folia*, Dub. The leaves of monk's-hood.

The species of *Aconite* cited by Lond. & Edin. colleges, and the Phar. of U. S., has been regarded as the plant origin-

ally used by Stoerk—an error originating with himself. It appears from Willdenow's and the Dublin college's examination of the plant, that the species which we should use medicinally, is the *A. Nomontanum*. It is a perennial plant, flowering in July; a native of the Alpine forests of Carinthia, Carniola, and the mountainous parts of Germany.

Qualities. Taste moderately bitter and acrid, leaving in the mouth a sensation of heat and roughness, followed by numbness in the gums and lips, which continues for two or three hours. Odour faint and narcotic. The leaves of aconite, the part used in medicine, have their medicinal virtues impaired by drying. Mr. Brandes has ascertained that the narcotic principle of this plant is a peculiar alkali, to which he has given the name of aconita. The virtues of the leaves of aconite, are but imperfectly extracted by water and alcohol: for this reason, the extract is the fittest form of administration.

Medical Properties and Uses. This medicine possesses the powers, and produces the effects common to other narcotics. It occasions, in over doses, nausea, vomiting, vertigo, hypercatharsis, cold sweats, convulsions, and death. Stoerk of Vienna, first administered aconite in the year 1762. He gave it in rheumatism, gout, scirrhus, and paralysis; more lately it has been used in scrofula, cancer, and intermittents, with reputed good effect. The leaves are sometimes given in the form of powder, but they are variable in their effects. When thus given, they are combined usually with mercurial alteratives, antimonials, camphor, and other diaphoretics—the dose is from one to ten grains. Off. Prep. Extract. Aconiti, L. E.

No. 28.—Acorus Calamus. Sp. pl. Willd. W. P. C. Barton's, Veg. Mat. Medica, U. S. vol. ii. Sweet flag—Calamus.

Cabinet specimens, Jeff. Coll. Nos. 32 and 33—coloured figure of the plant, No. 34.

Cl. 6, Ord. 1. *Hexandria monogynia*. Nat. Ord. *Piperitæ*, Linn. *Aroideæ*, Juss.

Spadix cylindrical, covered with florets. *Cor.* petals 6, naked. *Style* 0. *Capsule* 3-celled.

Officinal. *Calami Radix*, Lond. *Acori calami Radix*, Edin. *Acorus* [*calamus aromaticus*] *Radix*. Dub. Sweet Flag.

A perennial plant, growing in marshes in Europe, Asia, and America.

Qualities. Pleasant aromatic odour, similar to the mixture of allspice and cinnamon; taste, warm, bitterish, pungent, and aromatic. The aromatic principle is an essential oil,

which may be obtained by distillation. It is extracted with the bitter matter, by infusion in boiling water. Contains a fecula, which is precipitated from the infusion by acetate, and super-acetate of lead.

Medical Properties and Uses. Aromatic tonic. Used in intermittents, combined with bark—in dyspepsia, alone, or with other aromatic tonics—relieves the vertigo attending this disease. I agree with Mr. A. Todd Thompson, that it is too seldom prescribed. It is a valuable medicine. Dose in substance, ℈j to ʒj in powder—of the infusion made with ʒvj of the bruised root and fʒxij of boiling water, a tea-cupful three or four times a day. Very weak, is useful for colic of babies. The shoemakers chew it to obviate the dyspepsia incident to their trade.

No. 29.—Adeps Preparata. L. ***Adeps sui scrofæ, vulgo Axungia porcina.*** **E.** ***Adeps suillus præparatus.*** **D. Prepared hog's lard.** ***Fat. Axunge.***

An emollient; use well known—principally in making ointments, plasters, and liniments.

Incompatible substances; extracts, spirituous preparations, tinctures, and infusions, are incapable of a perfect union with lard, without an uniting ingredient. All dry powders, vegetable or mineral; fixed and volatile oils; balsams; camphor; and soaps—form an intimate union with it.

No. 30.—Ærugo. L. D. ***(sub-acetus cupri impura.) Sub-acetas cupri.*** **E. Verdigris.** See ***Cuprum.***

No. 31.—Æsculus Hippocastanum. Common horse-chesnut.

Cl. 7. Ord. 1. *Heptandria monogynia.* Nat. ord. *Trihilata.* Linn. *Acera,* Juss.

Officinal. *Cortex,* the bark. Dub.

Cabinet specimen, Jeff. Coll. No. 35—coloured figure of the plant, No 36.

A large and elegant tree, native of the north of Asia, but cultivated over Europe and America—flowers in May.

Qualities. Bark inodorous, bitter, astringent, sub-aromatic. Water and proof-spirit extract its virtues.

Incompatible substances with the infusion. Sulphate of iron and zinc, oxymuriate of mercury, super-acetate of lead. Tartar emetic does not affect it. Gelatine throws down tannin.

MEDICAL PROPERTIES AND USES. A tonic; used in intermittents, typhus, &c. when cinchona is admissible. Dose, in powder, ℥ss—decoction to be made with ℥j to water 0j, and strained. Dose, f℥iss, or f℥ij, every three or four hours.

No. 32.—ÆTHER SULPHURICUS RECTIFICATUS. L. & U. S. Rectified sulphuric ether.

Cabinet specimen, Jeff. Coll. No. 37.

QUALITIES. A colourless liquid, of specific gravity 739; of a pungent and fragrant odour; excessively volatile and inflammable; when free from alcohol, boils at 98°; should never be administered near a candle; unites with alcohol and ammonia, in every proportion. A powerful solvent of balsams, resins, gum resins, wax, camphor, extractive, &c.; takes up one-twentieth of its weight of sulphur; does not dissolve alkalies.

MEDICAL PROPERTIES AND USES. An intense diffusible stimulant, narcotic, anti-spasmodic; may be given in sweetened water, or any cold infusion or decoction; useful in hysteria, tetanus, gastric cramp, hiccough, and to check vomiting in cholera morbus and sea-sickness—used, on account of the coldness generated by its rapid evaporation, as a refrigerant in burns and scalds; to facilitate the reduction of strangulated hernia; and to lessen high cerebral excitement of the blood-vessels. When externally applied, free access of air must be permitted to the part—for, covered or confined by linen folds, it is rubefacient, and even produces vesication. Mixed with muriatic ether, an instantaneous evaporation takes place, and a cold much below 0 of F. is engendered. Specific gravity is the best test of its purity. Sophisticated with alcohol and sulphuric acid: the first known by its forming with phosphorus a milky instead of a limpid solution—the second, by its reddening the tinct. of litmus, and by the precipitate which ensues on adding a solution of barytes. Long kept, undergoes spontaneous decomposition. Dose, f℥ss to f℥ij, repeated at short intervals. Inhaled, it excites the sensorium, like nitrous oxide gas. Boys made a toy of it, in this city, two years ago, by putting it in oyster bladders, and inhaling it through the pipe; it produced dangerous effects, and, it is said, two cases of death.

Formulæ—

No. 1. ℞

Tincturæ castorei,	fʒj	For an anti-spasmodic draught, to be taken three times a day.
Ætheris sulphurici.	♏ x	
Tinct. opii,	♏ vij	
Aqua cinnamomi,	fʒiss	

No. 2. ℞

Moschi	℈j	An anti-spasmodic draught, to be taken *pro re nata*.
Acaciæ gummi contriti,	ʒss	
Triturated well together, and then gradually add,		
Aquæ rosæ,	ʒj	
Ætheris sulphurici.	fʒj	

No. 3. ℞

Assafœtidæ,	ʒj
Aquæ menth. pip.	fʒiss

Triturate the assafœtida with water gradually added, and when well mixed, add

Tinct. Valerian. ammoniat.	fʒij
Tinct. castorei,	fʒiij
Ætheris sulphurici,	fʒj

A large table-spoonful every second hour. in hysteria.

No. 4. ℞

Tinct. assafœtidæ,	ʒj	A draught, for same purpose as No. 3.
Ætheris sulphurici.	ʒj	
Spir. lavend. comp.	ʒss	
Aquæ,	ʒj	

PHARM. PREP.—

No. 1. *Spiritus Ætheris Aromaticus.* L. Aromatic spirit of ether. Made with cinnamon, cardamon seeds, long pepper, ginger, and spirit of sulphuric ether, which is a preparation of etherial oil, or oil of wine, which see.

No. 2. *Æther Sulphuricus cum Alcohole Aromaticus.* Edin. Aromatic sulphuric ether with alcohol. Made with cinnamon, cardamon seeds, long pepper, sulphuric ether, and alcohol.

These two preparations are similar in properties, and the dose is the same as of No. 32.

No. 3. *Spiritus Ætheris Sulphurici.* Lon. Spirit of sulphuric ether. A mixture of half a pint of sulph. ether, with a pint of rectified spirit, used in No. 1. and 2. The following are its synonyms:—

Æther Sulphuricus cum Alcohole. Edin. Sulphuric ether with alcohol, being a mixture of one part of the former, with two parts of the latter.

Liquor Æthereus Sulphuricus. Dub. Sulphuric ethereal liquor. Made of 32 ounces of sulph. ether, and the same

of rectified spirit, the latter heated to 120°, and poured into a glass retort, fit to bear a sudden heat, and the acid added in an uninterrupted stream; used for the same purposes as sulph. ether.—but is less active. Dose f℥i to f℥iij, or f℥iv.

Formula—

Barley water,	f℥vi	A gargle for slight inflammation of the fauces.
Syrup of marsh mallows,	f℥iv	
Of No. 3, above,	f℥j	

No. 4. *Spiritus Etheris Sulphurici Compositus.* Lond. Compound spirit of ether. Made of a pint of No. 3, and two fluid drachms of ethereal oil, (*Oleum Ethereum*, or oil of wine,) mixed.

Cabinet specimen, Jeff. Coll. No. 38.

This was intended by the London College, as a substitute for the anodyne liquor of Hoffman. Properly prepared, it is an invaluable medicine. It is well made in this city by the manufacturers of drugs—particularly Wetherill, Farr and Kunsi—and the respectable retail shops are supplied by them with it. I have known a miserable substitute for it, sold out of some shops, under the name also of Hoffman's anodyne; No. 4 is stronger than sulphuric ether.

Medical Properties and Uses. Stimulant, antispasmodic, and *supposed* anodyne. United with laudanum to procure sleep, it is anodyne—and this is a good union, preventing the former from producing nausea. Dose, from f℥ss to f℥ij, in sweetened water, one ounce.

No. 33.—Ætheris Nitrosus. Dub. Nitrous Ether.

Cabinet specimen, Jeff. Coll. No. 39.

Made from nitrate of Kali.

Qualities. Strong ethereal odour, less fragrant than No. 32. Taste strong and peculiar; colour yellow-white, which is supposed owing to the presence of a little nitric oxide. Highly rectified, its specific gravity is 0.866; more volatile than No. 32; boiling at 70° F.; producing a greater degree of cold by evaporation; very inflammable; requires 48 parts water for its solution; combines with alcohol in every proportion; absorbs nitrous and acetic acids—which are formed in it when long kept.

Not used in this state in medicine, the preparation from it only being employed in the following—

Pharm. Prep.—

No. 1. *Spiritus Ætheris Nitrici.* Lond. Spirit of nitric ether. Made by gradually mixing two pints of rectified

spirit, with three ounces by weight, of nitric acid, then distilling by gentle heat, twenty-four fluid ounces.

No. 2. *Spiritus Ætheris Nitrosi.* Edin. Spirit of nitrous ether. Made of 3℔ alcohol, 1℔ nitrous acid, gradually mixed, the alcohol being placed in a vial immersed in cold water; the mixture is then distilled by the heat of boiling water, into a cool receiver; the spirit comes over.

No. 3. *Spiritus Ætherеus Nitrosus.* Dub. Nitrous ethereal spirit. Differently directed by this college from the preceding.

Nos. 1, 2, and 3, known by the common appellation of *sweet spirit of nitre.*

Qualities. Fragrant; pungent, acidulous taste; very volatile; inflammable; soluble in water and alcohol. Coagulates tinct. Guaiacum, turning it deep blue; strikes a deep olive with solution of green sulphate of iron. Dr. Paris says, it communicates a flavour resembling French brandy to malt liquors, when added to them in small quantities.

Medical Properties and Uses. Refrigerant, diuretic, antispasmodic. In the dose of ♏xx to ♏xl, in a cupful of water, is a grateful drink in fevers. In larger doses, relieves nausea and flatulence; in half ounce doses, is a powerful diuretic; used with other diuretics in dropsy; used in gonorrhœa, alone, or combined with balsam copaiva; well adapted to strangury, or difficult urination in children; becomes decomposed by keeping, and hence, if not well stopped, its medicinal properties are deteriorated.

No. 34.—Alcohol. L. D. & U. S. Alcohol. Ardent spirit.

Qualities. Dissolves soap, vegetable extract, sugar; oxalic, camphoric, tartaric, gallic, benzoic acids; volatile oils, resins, and balsams; combines with sulphur, and the pure fixed alkalies, but not with their carbonates. Its other properties and uses, unfortunately too well known and resorted to. There are two pharm. preps., the rectified spirit, and the diluted alcohol, or proof-spirit, for which see *spiritus rect.* and *tenu.*

Medical Properties and Uses. Detailed in the lectures. Wine is a liquor much used in medicine, which see.

No. 35.—Allium.

Cl. 6, Ord. 1. *Hexandria monogynia.* Nat. Ord. *Spathaceæ,* Linn. *Asphodeli,* Juss.

Three species medicinal, viz. the leek, common garlic, and the onion.

No. 36.—Allium Porrum. Officinal, *Porri Radix*. Lond. Leek root, (bulb.)

A native of Switzerland.

Qualities. Pungent odour, acrimonious taste, owing to an essential oil, which is nearly dissipated by boiling, and is separable by distillation.

Medical Properties and Uses. Stimulating diuretic; expressed juice, used advantageously in dropsies, ascites, &c. Dose, f℥ss, to f℥ij, mixed with mucilage or syrup.

No. 37.—Allium Sativum. Officinal, *Allii Radix*. Lond. U.S. *Allii Sativi Radix*. Edin. *Allium Radix*. Dub. Garlic root, (bulb.)

A well known perennial bulbous root, found wild in Sicily, and cultivated every where.

Qualities. Whole plant of pungent, offensive odour, and acrimonious, biting taste—these properties strongest in the bulb. Like No. 35, contains an essential oil, which blisters the skin, and strikes a black colour when triturated with oxide of iron. Coction renders garlic mild and medicinally inert; the acid principle may be obtained by expression.

Medical Properties and Uses. Stimulant, diaphoretic, diuretic—rubifacient, externally. Its application to diseases, detailed in the lectures. Off. prep. *Syrupus allii*. D. U. S. A good medicine. Taylor's remedy for deafness, is garlic, infused in oil of almonds, and coloured by alkanet root.

No. 38.—Allium Cepa. Officinal, *Cepa; Radix*. Dub. The onion.

Qualities. Odour and taste resembling garlic, but weaker; contains some acrid, essential oil, in union with sulphur, got by distillation; the recent juice contains sugar, mucus, phosphoric acid, phosphate of lime, and citrate of lime. It is the sulphuretted oil, which blackens silver spoons and utensils, in which onions are placed, and which occasions the offensive odour they give out in putrifying. **Economical use well known.**

Medical Properties and Uses. Same as garlic, but weaker. Owing to the free phosphoric acid contained in onions, they have been supposed useful in calculous diseases, as it dissolves the lime out of the body. Syrup of onions, is a common, domestic, and excellent remedy; the officinal syrup of garlic, (*Syrupus allii*. D.) is too little used. Details in lectures.

No. 39.—Aloes Extractum. Aloes.

1. *Aloe Perfoliata* and *A. Hepatica.*
2. *Aloe Spicata.* Cape aloe. Bitter aloe.

Synonyms of Aloe Perfoliata.—

Aloe Perfoliata Socotorina. Woodville.
Aloe Socotorina. Lond. & Edin. Pharm.
Aloe Vulgaris. Jussieu, Bauhin, and Sibthorpe.

Cl. *Hexandria.* Ord. *Monogynia.* Nat. ord. *Coronariæ,* Linn. *Asphodeli,* Juss.

1. Root perennial, fleshy, brownish, beset here and there with numerous fibres, sending forth a stem never exceeding a foot high.

Leaves thick, succulent, seven to twelve inches long, about three inches broad towards their base; pointed amplexicaule, and as it were perfoliate, covered with a glaucous investment, bordered with spinous teeth resembling the teeth of a pike.

Flowers slightly pendant, disposed in a corymbous manner on a simple cylindrical spike, garnished with numerous bracteiform scales, arising from the centre of the leaves, or their bosom. Calix monophyllous, tubular, nearly cylindrical, divided into six small segments at the limb, which are green, all the rest of the tube and limb of a red-orange colour. The stamens are slightly exsepted beyond the calix.

The fruit is an oblong capsule, marked with three projections, divided interiorly into three cells, containing semicircular, angular, flat seeds.

Native originally of Africa, whence it has been introduced into Asia, Spain, Sicily, the West India Islands, where it is naturalized or grows spontaneously.

Remarks.—Aloe Perfoliata or *Vulgaris,* yields the socotorine, hepatic, and caballine Aloes. The Barbadoes Aloes, is the same as hepatic. *Aloe Spicata* yields unquestionably the best extract, and grows native at the Cape of Good Hope and in the interior, particularly at Zwellendam, near Mossel Bay. It is said also to yield the extract brought from the island Socorina, or Socotora. The following is its description:—

Stem round, four inches in diameter, leafy at the top, and rising three or four feet in height. Leaves spreading about two feet long, sub-verticillate, broad at the base, gradually brought to a point, channelled, acute, and remote teeth. The flowers spread horizontally in very close spikes. Under each flower is a single ovate, broad, membranaceous bract, white, with three green streaks, and a little shorter than the corolla. This is bell-shaped, and 6-petalled: the three inner segments are white, marked

with three green lines, not connected together, ovate blunt, and broader than the three outer, which are connected with them at the base, and resemble them, but are narrower and less concave. The flower contains a large portion of a purple honey juice. The seeds, which are numerous, have a membranaceous border, and are contained in a superior capsule.

The first juice which exudes on cutting off or incising the leaves at the base, and which is collected and allowed to harden, is the Socotorine Aloes. The next process consists of cutting up the leaves in small pieces, and obtaining the residual juice by heat—this constitutes Hepatic Aloes, or Barbadoes. A third process, obtaining a less pure concrete, and adding foreign substances or impurities, makes the Caballine or Horse Aloes—not used in medicine, except veterinary practice. The real Socotorine Aloes are rare in the market, the greater part of what is there being brought from Bombay, and are the real Hepatic Aloes. Socotorine is shining, and breaks with a glossy fracture—Hepatic is duller and browner. Socotorine Aloes have a peculiar, rather aromatic odour; and permanent and intense bitter taste; is of a deep reddish brown colour, the edges and small fragments are semi-transparent, and of a reddish or golden colour; softens in the hand and is adhesive; is easily enough pulverizeable; the powder is of a bright yellow hue. Cape or fine Aloes, has a stronger and more disagreeable odour, than the Socotorine or Hepatic, taste about the same. Outside of the pieces more friable, more yellow, and less glossy; the colour of the powder is greenish yellow. A Mocha Aloe resembling the Cape, is in commerce; it is less purgative.

According to the account given in No. 39, there are in commerce four drugs known by the name of Aloes, or Bitter Aloes:—

1. *Cape Aloes*, or *Shining Aloes*, which is obtained from *Aloe Spicata*, and is far superior to the others. Cabinet specimen, Jeff. Coll. No. 40.
2. *Socotorine Aloes*—next in goodness; now rarely met with—the best Hepatic Aloes, or Barbadoes Aloes, being sold for it—obtained from *Aloe Perfoliata*. Cabinet specimen, Jeff. Coll. No. 41.
3. *Hepatic Aloes*, called also Barbadoes Aloes—obtained from the same plant as the preceding, by a different process—but, according to Smith, from *Aloe Hepatica*, another species. Cabinet specimen, Jeff. Coll. No. 42.
4. *Caballine Aloes*—far inferior to the others; being obtained by a more forcing process from the leaves which, by the process of making Hepatic Aloes, give out by that process no more juice. This Horse Aloes is very different in ap-

pearance from either of the others—is called *Fetid Aloes* Cabinet specimen, Jeff. Coll. No. 43.

There is another Aloes, besides those above mentioned, common in the Indian bazaars, of an inferior quality to them all, resembling what in Europe is termed Barbadoes Aloes. It is brought from Zemen, in Arabia, to the western ports of the Peninsula, and is, in all probability, obtained from the *A. Perfoliata*. L. This species, according to Ainslie, is common in India, though he did not learn that any of the drug was prepared from it. There is a coarse kind of Aloes, common in the bazaars of India, which is perhaps prepared from it—called *musambrum*.

Virey says, the *Agave Americana* yields a yellow juice, analogous to Aloes, which is sudorific.

Properties. Aloes yield a small portion of vegetable mucus, resin, and a peculiar extractive matter. Braconnot found Aloes to consist chiefly of a peculiar bitter matter, which principle he called the resinous bitter principle. The superiority of the Socotorine, Cape, and Bombay Aloes, is supposed to be owing to their containing a larger proportion of it, and consequently less resin than Hepatic or Barbadoes Aloes. Boiling water dissolves nearly the whole of any of the kinds; but as the solution cools, the resinous part is deposited. And by boiling Aloes in water, the extractive principle is altered, rendered insoluble in water, and approaches in properties the nature of resin. Socotorine Aloe, distilled, yields a volatile oil—Hepatic does not.

Medical Properties and Uses. All kinds agree in medicinal properties—are warm stimulating cathartics, slow of solution, and thence act on the colon and rectum chiefly. Contra-indicated in hæmorrhoidal diseases, and plethoric habits of irritable temperaments, and during catamenial flux; expel Ascarides from the rectum; supposed improper in pregnancy—Denman says, the common people, in that state, use them with impunity. Dose, from 5 to 20 grains, chiefly used in compounds; with *Canella Alba*, form *Hiera Picra*. In substance, Aloes should be given with yolk of egg, or with an acid or alkali. Aloes act on the bowels, if applied externally, as a liniment or plaister, to the surface of the body—applied to caries of bones, they do the same. Are the base of numerous quack pills, and various nostrums and compounds of pharmacy.

Celsus, and other ancient writers, esteemed Aloes less hurtful to the stomach, than other cathartics. This is the opinion of the native practitioners of India—by them also applied externally round the eye, in chronic ophthalmia. The Tamool doctors toast it, and give it for bowel affections of lying-in women.

Economical uses of the plant, &c. The leaves, deprived of their juice after aloes are obtained, form excellent fuel.

An aloetic varnish is prepared from Aloes, which is used to preserve dried insects, feathers, and other things, in collections of natural history. Vessels are also preserved by it from the ravages of the famous naval worm.

Dr. Charles William Pœrner has obtained a beautiful brown colour, by the simple immersion of woollen cloth in a decoction of Aloes. Jean Fabroni, a distinguished man of Florence, has made of Socotorine Aloes, a dye which communicates its hue to silk without the aid of any mordant, producing a very persistent violet colour. The same juice, made sufficiently thick, gives miniature painters a beautiful transparent colour.

Many species of Aloes are very large and tall, with large leaves, which are impregnated with a sweet juice, from the fermentation of which a delightful liquor is obtained. Cordage is made of the leaves; and the largest Aloe of South America furnishes the Mexicans with almost all the wants of life—viz. the *Agave Americana*, or great American Aloe. The genus *Agave* closely resembles that of Aloe. This furnishes the Mexicans with cordage, for boats and other purposes, of an incorruptible nature, with tiles for roofs, rafters, paper, hammocks, vinegar, wine, honey, and materials for impenetrable hedges; in short, for the numerous wants of economy.

Officinal Preparations. Pulv. aloes comp. L. Pil. Aloes cum myrrha. L. E. D. Pil. Aloes comp. Pil. Aloes cum assafœtida. E. Pil. Aloes cum colocynthide. E. Pil. Cambogiæ comp. L. Pil. Rhei comp. E. Pil. Scammon. cum Aloë. D. Decoctum Aloes comp. L. Extractum Aloes purificatum. L. D. Extractum colocynthidis comp. L. D. Tinct. Aloes. L. E. D. Tinct. Aloes comp. L. E. D. Tinct. Aloes ætherea. E. Tinct. Benzoin, comp. L. E. D. Tinct. Rhei et Aloes. E. Vinum Aloes. L. E. D.

Formulæ—

No. 1. ℞ Opii pur. gr. i
Pulv. Aloes cum myrrh, gr. iv
M. A pill to be taken at bed-time—it obviates the binding effect of opium.

No. 2. ℞ Opii gr. ij
Extract. Aloes spicat. gr. x
M. Divided into three pills—one at bed-time—has the same effect nearly as No. 1.

No. 3. ℞ Opii pur. gr. i
Extract. Aloes spicat. gr. iij
Extract. gentian. gr. v
M. Divided into two pills—which may be taken as a dose.

For the numerous compound pills, not pharmaceutical, into which Aloes enter as an active ingredient, I refer you to the article *Pills*, in Vol. II.

No. 40.—Althæa Officinalis. Common Marsh Mallows.

Officinal. *Althæa Folia et Radix.* Lond. *Radix.* Edin. The leaves and root of Marsh Mallows.

Cabinet specimens, Jeff. Coll. Nos. 44, 45, 46. Coloured figure of the plant, No. 47.

Cl. 16. Ord. 8. *Monadelphia Polyandria.* Nat. ord. *Columniferæ*, Linn. *Malvaceæ*, Juss.

Gen. char. *Cal.* double; the exterior 6 or 9-cleft. *Caps.* numerous, 1-seeded.

A plant indigenous to marshy situations, and the borders of rivers, throughout all Europe—cultivated in this country; flowers in June.

Qualities. Root inodorous, mucilaginous when chewed; externally tough and yellowish, internally white and fibrous; contains much mucus, which it yields to water by coction.

The mucus of this and other plants differs from the mucilage of gum Arabic, in not being precipitated by silicated potash, nor affected by red or oxy-sulphate of iron.

Medical Use. Used in decoction and infusion of the leaves, root, and flowers, in calculous complaints and bowel affections; the roots boiled and bruised, for an emollient cataplasm; a decoction of the leaves, as a fomentation for abrasions of the cuticle and skin, and in cutaneous eruptions yielding a sharp ichorous discharge.

Pharm. Prep. Decoctum althææ officinalis. L. Syrupus althææ. L. E.

No. 41.—Alumen. L. E. D. & U. S. Alum.

Super-sulphas Aluminæ et Potassæ—Sulphas Aluminæ. E.

Cabinet specimens, Jeff. Coll. Nos. 48, 49, 50.

This well-known salt is a ternary compound of alumina, potash, and sulphuric acid. It is often found native, as at Göttwig in Austria, effloresced on bituminous schistus—and frequently united with the soil, in volcanic regions, as at Solfatara, near Naples; where the only processes necessary for its extraction, are lixiviation and evaporation—these are performed in pans sunk in the ground, the heat of which is sufficient to carry on the evaporation. The chief part of the alum of commerce is obtained by a pecu-

lar preparation of schistose pyritic clays, called alum ores. At Tolfa, near Civita-Vecchia, where the best Roman alum is made, the ore is alum-stone, or sulphuretted clay, found in large stratified masses among compact iron-shot argillaceous lime-stone; but at other places, both on the continent of Europe and in Great Britain, it is manufactured from pyritaceous clay, which is in black, hard, brittle masses—volcanic aluminous ores, a white saline earth; shale alum slate, which occurs amorphous, or in concentric balls. At Hurlett, near Paisley, the largest alum mine in Britain, the schistus lies ten inches thick above the coal beds. An alum is found near Moscow, which contains much sulphate of iron. It is abundantly diffused, in a formed state, through many parts of the earth. Considerable quantities have been found in different parts of the United States, as in Pennsylvania, Maryland, and Virginia. Formerly deemed one of the ingredients in mineral waters; first doubted by Dr. Hoffman, who denied that it could be detected in these waters, in their natural state; afterwards ascertained that martial vitriol, or sulphate of iron, gives these waters a sourish taste, and had probably been mistaken for alum. Yet Dr. Lavard assures us, that the Somersham chalybeate, in the county of Huntingdon, in England, contains alum. Dr. Morris obtained it from this mineral water, in the proportion of five grains, in crystals of alum, to two pounds of water. Dr. Rutty suspects that the mineral water at Ballycastle, in the county of Antrim, in Ireland, contains a pittance of alum.

It has been supposed by Mr. A. T. Thompson, that alum was unknown to the ancients, since the στυπτηρια of the Greeks, and the *alumen* of the Romans, were mere vitriolic earths. The first regular alum works appear to have been established by the Asiatics, in the middle ages, particularly at Roccha in Syria, whence the name of a kind of alum called Roche or Roch alum; and from these works Europe was supplied, until the 15th century. After this, works were begun at Tolfa and Voterra, in Italy; at Oberkautungen, and several other places, in Germany; and at Almacoran, in Spain. In England, in the reign of Elizabeth, Sir Thomas Chaloner established the first alum works at Gisborough, in Yorkshire. The largest manufacturers of alum at present in that country, are those on the estates of Lord Glasgow, at Hurlett, and those of Lords Dundas and Mulgrave, at Whitby, in the same county. The best kind is the Roman alum—it is the purest: it is in irregular octohedral masses, powdery on the surface—it contains no ammonia in its composition. "A. rubrum, in crystals pale red when broken, and covered with a reddish efflorescence." *Gray.*

The *Alumen de Rocchi, Roch Alum, Alumen rupeum.*

This variety was originally brought from Roccha, formerly called Edessa, in Syria, in fragments about the size of an almond to that of an egg, covered with an efflorescence of a pale rose colour. That which is now sold under this name is common English alum, artificially coloured by prepared bole. It is unimportant. The English or German alum, in large masses, procured by the solution of it to saturation, being poured into barrels and allowed to crystallize, is the article met with generally in commerce.

Qualities. Has the property of retarding, and in some instances of preventing, the acetous fermentation of vegetables. Added to common *paste*, it prevents it from becoming sour, and hence is used to give firmness to paste used by bookbinders and paper-hangers; such paste may be kept for weeks in winter. Animal substances, as *glue*, are preserved by it in a similar manner.

Medical Properties and Uses. A powerful astringent; used both externally and internally, in hæmorrhages, fluor albus, diarrhœa, diabetes, intermittent fevers—in colica pictonum, as a prophylactic and remedy. Under circumstances mentioned in the lecture on Cathartics, it becomes purgative.

Boerhaave's astringent powder for the ague, consisted of alum and nutmeg, with the addition of Armenian bole—he remarks, that both the alum and nutmeg were disagreeable to the stomach, and prevented a repetition, where more agreeable and more certain medicines were at hand. Dr. Lind assures us, that next to the bark, he has prescribed no medicine with greater success, in the treatment of fevers, than "alum joined with nutmeg." Dr. Adair found it of great service, combined with canella alba and bark, in the intermittent fever of Antigua, in the year 1779: observing that the bark, given alone, rarely cured those fevers. Darwin was of opinion, that alum was peculiarly adapted to the cure of fevers attended with a diseased state of the bowels. Chalmers recommended a particular administration of alum, in the putrid bilious fever of that country, with elix. vit. and snake-root.

In old and obstinate diarrhœas, in cholera morbus, and even in cases of cholera infantum, in union with laudanum, or as alum-whey, it has been serviceable. Mynsicht, Crell, Cullen, Van Helmot, and many others, have derived benefit from alum, in hæmorrhages. Cullen did not find it useful in hæmoptisis, and assigns as a reason, that this is always an active disease, and one in which astringents are always hurtful. He used it successfully in uterine hæmorrhage. Van Helmot is said to have acquired a portion of his celebrity, by reason of cures of this disorder, which he

made by alum and opium conjoined. Leake used it in solution as an injection, in protracted sanguineous discharges from the uterus, connected with great relaxation. Helvetius, as early as 1691, declared alum to be a specific in hæmorrhages. He used alum fused with a portion of *sanguis draconis*, which was called *pulvis stypticus*—a name still retained in some pharmacopeias—but *kino* has been substituted for the dragon's blood. Dr. Thompson, a Scotch physician, has published an account of his success of the *Pulvis Helvetii*, in uterine hæmorrhages. In menorrhagia, combined with galls, may very beneficially be employed—when it purges, laudanum may be added. Dr. Fowler found alum useful, in scorbutic hæmorrhage. For scorbutic gums and cancer oris, gargles made of alum, sage, and honey, useful. Combined with the *heuchera Americana* (or alum-root,) galls, or *geranium maculatum*, it has been also found serviceable in gonorrhœa and leucorrhœa. In the disease of diabetes, alum has had advocates of celebrity, among whom were Drs. Dover and Mead. Darwin supposes that it acts, in curing this disease, by exciting the absorbents of the bladder to their natural action. It probably acts as a tonic or astringent, and cures very old cases of the disease, when it does so at all. Cullen observes, that alum-whey was frequently used in the treatment of diabetes, in the Edinburgh Infirmary, without success. Brocklesley and Vogel have used it with advantage; and some physicians of this country have advocated the same practice. Dr. Barton used to relate, in his lectures, that Dr. Wistar had cured one case of diabetes, in this city, entirely by alum-whey. Selle also states, that he cured an obstinate case of this disease, by alum.

Recommended by Dr. Percival as a prophylactic against colica pictonum, and as a cure for it. Dr. Grashius first recommended its use, in this disease: he used the dried alum, (*A. exsiccatum.*) Dried alum has been principally used as an external application. Richter commends alum in colica pictonum. It would be easy to adduce the testimony of numerous other physicians in favour of this practice—as Sommer, Gebel, and Lentin. Finally, alum has been recommended in gastric debility and colliquative sweats.

Formerly much used as a gargle, in putrid sore throat. Decoctions of Virginia snake-root and rhus glabrum, with a portion of alum dissolved in the liquid, beneficial in ulcerated throat and fauces—have given way to capsicum.

After inflammation has been somewhat subdued by depletion, or in chronic ophthalmia, alum curd is useful. In ophthalmia membranarum, Cullen found alum more powerful than white vitriol or sugar of lead. Some have recommended alum curd; but Cullen has found the solution

in water to be still more effectual. May be exhibited in—1. A solution. 2. In substance made into pills, with extract. 3. In the form of whey, called *serum aluminosum*. 4. In the form of curd, or the alum curd of Riverius—*Albumen Aluminosum*. The first of these is made of such strength as may be required for the purpose intended to be answered, and indeed varies according to the views of the practitioner. The second is a convenient mode of exhibition, in cases of hæmorrhage. The third, or alum-whey, is made by boiling ℥ij of alum with a pint of milk, and then straining, the dose of which is a wine-glass-full The fourth, or alum curd, is made by briskly agitating a drachm of alum with the white of an egg, in some convenient utensil, when the coagulum is formed. It is applied between two fine linen cloths, or sometimes gauze. The dose of alum is from 10 grains, up to 15 or 20. It is a good plan to begin with small doses, since large ones are apt to irritate the stomach, and excite vomiting, some pain, and purging. Long continued, it is said to excite obstinate constipation of the bowels.

Alumen exsiccatum, L. of the pharmacopeias, is one of the preparations used. It is the *Alumen ustum*, or burned alum, of the Dublin College. By the action of heat, alum undergoes watery fusion, yields its water of crystallization, and loses more than one-third of its weight. If the heat be too intense, or too long continued, it loses a great part of its acid. Dose, internally, ℈j—it is principally used as an external application; and owing to its escharotic property, it is useful in venereal chancres, and other ulcers having feeble and spongy granulations. It is much employed to destroy fungous excrescences; but it should be remembered, that it owes its escharotic power to an excess of acid, and if not so prepared as to redden syrup of violets, it will prove ineffectual.

The officinal preparations are—Liquor Alum: co. L. Pulv. Alum: co. E.

No. 42.—Ammoniacum. L. E. D. & U. S. *Ammoniac*—the product of *Heracleum Gummiferum*, which see.

No. 43.—Ammoniæ Murias. L. *Murias Ammoniæ*. E. *Sal Ammoniacum*. D. Sal Ammoniac.

Cabinet specimen, Jeff. Coll. No. 51.

This salt is a compound of No. 17 and ammonia; is found as a product of volcanoes. The eruption of Etna, in 1811, afforded as much as supplied all the manufactories and apothecaries' shops in Sicily. That employed in medicine

and the arts, is artificially prepared. Was formerly prepared in Egypt by subliming the soot of fuel formed of the dung of phytivorous animals, kneaded with straw into cakes, and dried in the sun. Is now manufactured in different ways, in Europe: in England, has been made by decomposing bones into small pieces, extracting the marrow and fat by boiling, then distilling from an iron cylinder into a leaden receiver, and cooling by a refrigeratory, which forms the cover, and contains about four inches of water. This process yielded six parts impure alkaline liquor, and five of fetid oil: the latter was skimmed off, and powdered gypsum mixed with the former. In the subsequent steps of the process, common salt was added; and by evaporation and other steps, *Muriate of Ammonia* is obtained. The cakes are hemispherical; about an inch thick; elastic; and when broken towards the convex surface, white, striated, and opaque—towards the concave, have a more crystallized appearance, and nearly semi-transparent. Sometimes met with in conical masses, which are deliquescent, owing to the presence of muriate of lime—hence unfit for medical use. Inferior sort imported from East Indies.

Qualities. Inodorous; of a salt, bitterish, acrid, cool taste; slightly imbibes moisture from the air; specific gravity, 1.450; somewhat ductile; easily pulverized; soluble in 3.25 times its weight of water, at 60°—in its own weight, at 212°. Great reduction of temperature takes place during the solution. Soluble in 4½ parts alcohol.

Incompatible salts with it, are—super-acetate of lead, nitrate of silver, and all the metallic salts, the bases of which form insoluble compounds with No. 17.

Medical Properties and Uses. Is purgative, diuretic, diaphoretic, and emetic, according to form of exhibition—seldom used internally—used externally, on account of its generating cold, to assuage pain of inflammation, which it reduces; for head-ache; mania; apoplexy; injuries of the head; and as an adjuvant in reduction of strangulated hernia; according to Berzelius, for dropsy of thyroid gland. When this salt is used as above, it should be dissolved immediately before application.

Dr. Eberle has used it internally in large doses (15 gr.) three times daily, and successfully, in discussing indurated and enlarged tonsils. Recommended, in a late Numb. of Hufeland's Journal, in enlarged and scirrhous prostrate gland—in the same doses.

Sophisticated with sulphate of ammonia, which is detected by muriate of barytes—it causes a copious precipitation. When pure, No. 43 may be entirely volatilized by a slow heat.

OFFIC. PREP. *Ammoniæ sub-carbonas.* L. E. D. & U. S. *Liquor Ammoniæ.* L. *Aqua Ammoniæ.* E. D. *Hydrargy. Præcip. Alb.* L. *Alcohol Ammoniatum.* E. D. *Ferrum Ammoniat.* L. E. D.

Formulæ—

No. 1. ℞ Ammoniæ Muriat. ℥ij
Acidi Acetici. f℥ij
Spir. Camphor. f℥ss
} Mixed, for a lotion.

No. 2. ℞ Ammoniæ Muriat. ℥j
Alcohol, f℥j
Aquæ, f℥ix
}

Mixed for a lotion, to indolent tumours, gangrene, scabies, and chilblains—in which cases, it is said by Mr. A. T. Thompson, that it is better not to be dissolved too recently. Also, a gargle for cynanche.

No. 3. ℞ Liquefy soap ℥j, and lead plaster ℥ij, together, to which, when nearly cold, add ℥ss of Muriate of Ammonia, in fine powder.

This ammoniated plaster to be applied immediately after made, and renewed every four hours. This is Dr. Paris's rubifacient and powerful stimulant, in pulmonary affections—he says, "I have often applied this plaster with evident advantage to the chest, and I wish to recommend it to the attention of practitioners. It is very useful, also, in rheumatic affection of the muscles of the chest."

No. 4. ℞ Ammoniæ Muriat. ℥iij
Ext. Glycrrh. ʒss
Aquæ ℥viij
}

A mixture—dose, a table-spoonful three times a day, for scirrhous prostrate, and tonsils. Would it be of benefit in scirrhus uteri?

No. 44.—AMYGDALIS COMMUNIS. Common almond tree.

Varieties—β *Amygdalus Sativa.* Sweet Almond tree.
γ *Amygdalus Amara.* Bitter Almond tree.

Cl. 12. Ord. 1. *Icosandria Monogynia.* Nat. Ord. *Pomaceæ*, Linn. *Rosaceæ*, Juss.

Cal. 5-cleft, inferior. *Pet.* 5; drupe, with a nut perforated.

Officinal. *Amygdalæ Dulces*, *Amygdalæ Amaræ*, } Sweet and bitter almonds.

Amygdalæ Communis nuclei. Edin.

Cabinet specimens, Jeff. Coll. Nos. 52 and 53—coloured figure of the plant, No. 54.

Native of Syria and Barbary—naturalized in Europe, where its fruit does not ripen; flowers in March and April, before frondescence. These two varieties not distinguished from each other, but by the taste of the kernel of the fruit. The Valencia almond sweet, large, flat, pointed at one extremity, and compressed, as if by the thumb, in the middle. Italian, smaller, less sweet, less depressed in the middle. Jordan almonds come from Malaga; best and sweetest kind; said to be produced by a different species; are longer, flatter, less pointed at one end, less round at the other, cuticle paler, than the others. The bitter poisons fowls, parrots, and some animals; used to clear muddy water. All kinds yield a fine oil by expression.

Qualities. The *sweet*, inodorous, have a sweet bland taste: the *bitter*, triturated with water, have the odour of peach, and a pleasant bitter flavour.

Proust and Boullay have proved the similarity between the emulsion of sweet almonds and human milk.

Sweet almonds—oil 54, albumen 24 (on which the indigestible property depends,) sugar 6, gum 3, with traces of acetic acid. The bitter contains, in addition to these, hydrocyanic acid, in union with a peculiar volatile oil, on which its narcotic effect depends. Yet these last principles are so modified by their natural combination with the preceding, that they may be eaten with impunity—they have long been considered as an antidote to drunkenness. Water distilled from bitter almonds, deleterious to man and animal.

Medical Properties and Uses. *Sweet*—alimentary; not nutritious; heartburn is said to be relieved by eating six or eight, decorticated. Triturated with water, milky emulsions are formed. ℥ij almonds saturate about f℥vi water. Used for suspending in water, substances not miscible with it, as camphor and gum resins; to assist in pulverizing refractory substances. Mr. A T Thompson has found the emulsion useful as a lotion, in acnè rosacea, and in impetigo. The bitter almonds, eaten by some persons, produce *urticaria*—rare.

Offic. Prep. *Confectio Amygdalarum.* L. *Emulsio Camphoræ.* E. *Emulsio Acaciæ Arabicæ.* E. D.

Amygdalæ Placenta—almond cake—substance left after expression of the oil—ground, is almond powder—used as soap by ladies and dandies.

Oil of almonds is the same, procured from the bitter or the sweet; used as an emulsion, united with 1, mucilage—2, yolk of egg—or 3, an alkali. The first is most convenient—with 2, forms a grateful mixture—f℥j of oil requires ♏viij liquor potassæ, and f℥j of distilled water.

Substances incompatible are, acids; honey; syrups; tartrate and super-tartrate potass; super-sulphate potass; oxymuriatic mercury; resins; hard water.

Formulæ.—

No. 1. ℞ Olei amygdal. f℥j
Acaciæ gummi. ℥iij
Rubbed together, then add gradually,
Aquæ distillatæ, f℥vj
Table-spoonful two or three times a day, for cough.

No. 2. ℞ Olei amygdal. f℥vj
Liquoris potassæ, ♏l
Aquæ rosæ, f℥vijss
A mixture taken as No. 1.

No. 45.—Amylum. Common starch is the fecula of Triticum hybernum, or wheat.

Qualities. White columnar masses; odour faint; tasteless; soluble in boiling water.

Medical Use. Is the common vehicle for opiated enemata.

Off. Prep. *Mucilago Amyli.* L. E. D. *Pulv. Tragacanth. Comp.* L. *Pill Hydrargyri.* E. *Trochisci gummos.* F.

Iodine is a delicate test of the presence of starch.

No. 46.—Amyris.

Cl. 8, Ord. 1. *Octandria monogynia.* Nat. Ord. *Terebinthaceæ*, Juss.

Calyx four-toothed. *Pet.* 4, oblong. *Stig.* four-cornered. *Berry*, drupaceous.

Two species.

1. *Amyris elemifera.* Elemi tree.
2. *Amyris Gileadensis.* Balsam of Gilead tree.

AMYRIS ELEMIFERA.

Officinal. *Elemi.* Lond. *Elemi, Resina.* Dub. *Elemi.*

Cabinet specimen, Jeff. Coll. No. 55.

Native of Carolina and the Brazils—a small tree. Resin obtained by incisions in the bark, in dry weather; left to dry in the sun as it exudes; was formerly brought from Turkey.

Qualities. Fragrant aromatic odour: taste bitter and warm. The cakes are a pale yellow colour, semi-transparent, brittle outside, soft and tenacious within: very inflammable—affords an essential oil, on which its fragrance depends. Alcohol dissolves the greater part.

Medical Properties and Uses. Stimulant, not used internally, but in the mild digestive ointment, which is its only

Official Preparation. *Unguentum elemi compositum.* L. D.

No. 47.—Amyris Gileadensis.

Officinal. *Resina liquida.* Edin.

Balsam of Gilead, the product of the second species of No. 46, which is a tree native to Abyssinia. The Edinburgh College is the only one which retains it; it is said, by Mr. A. T. Thompson, never to be brought genuine.

No. 48.—Anchusa Tinctoria. Dyer's Alkanet.

Officinal. *Radix.* Edin. *Anchusa; Radix.* Dub. Alkanet root.

Cabinet specimen, Jeff. Coll. No 56—coloured figure of the plant, No. 57.

Formerly used as an astringent, now obsolete. Used only as a colouring matter for oils, ointments, and plasters—imparts a fine deep red colour.

No. 49.—Anethum.

Cl. 5, Ord. 2. *Pentandria monogynia.* Nat. Ord. *Umbellatæ.*

Fruit nearly ovate, compressed, striated. *Pet.* involuted, entire.

Two species—

1. *Anethum graveolens.* Common Dill.
2. *Anethum fœniculum.* Sweet Fennel.

No. 50.—Anethum Graveolens. Officinal, *Anethi Semina.* Lond. Edin. Dill seed.

Cabinet specimen, Jeff. Col. No. 58—figure of the plant, No. 59.

Aromatic and sweet—called carminative; used in flatulent colics and hiccough. Dose of powdered seed, grs. xv to ʒi—rarely employed. Why Dr. Paris has inserted these seeds, and pretermitted No. 51, I cannot imagine.

Mo. Bot. Garden,
1899.

No. 51.—Anethum Fœniculum.

Cabinet specimen, Jeff. Coll. No. 60—figure of the plant, No. 61.

Officinal. *Fœniculi Semina.* Lond. Edin. *Fœniculum Dulce Semina.* Dub. The seed and root of Sweet Fennel.

Qualities. *Root*, a slight sweetish taste, and aromatic warmth. *Seeds*, a sweet warm aromatic taste, depending on an essential oil; these qualities imperfectly imparted to boiling water—entirely to alcohol and to water, by distillation.

Medical Properties and Uses. An aromatic stimulant, very useful in babies' colics, in infusion. Dose of bruised seeds, ℈j to ʒj.

Offic. Prep. *Aqua Fœniculi.* L. D. *Oleum Seminum Fœniculi Dulcis.* D.

No. 52.—Angelica Archangelica. Garden Angelica.

Cabinet specimen, No. 62—figure of the plant, No. 63.

Officinal. *Radix*, the root of Angelica. Edin. A sweet aromatic. Dose in substance, ʒss, to ʒj, three or four times a day; rarely used; never by U. S. practitioners, though the drug is abundant in the shops.

No. 53.—Anisi Semina. Anise seeds, the fruit of *Pimpinella Anisum*, which see (an umbelliferous plant, like No. 50 and No. 51.)

No. 54.—Anthemis.

Cl. 19, Ord. 2. *Syngenesia Superflua.* Nat. Ord. *Compositæ discoideæ*, Linn *Corymbifera*, Juss.

Receptacle chaffy, *pappus* 0, or a membranaceous margin *Cal.* hemispherical, nearly equal. *Florets* of the ray more than 5.

Three species—

1. *Anthemis Nobilis.* Common chamomile.
2. *Anthemis Pyrethrum.* Pellitory of Spain.
3. *Anthemis Cotula.* Mayweed, wild chamomile, (*Pyrethrum.*)

No. 55—Anthemis Nobilis.

Cabinet specimen, Jeff. Coll. No. 64—figure of the plant. No. 65.

OFFICINAL. *Anthemidis Flores.* Lond. E. & U. S. *Chamamelum Flores.* Dub. Chamomile Flowers.

Indigenous to Europe—not to the United States. Flowering in August and September.

QUALITIES. Strong fragrant odour; bitter aromatic, somewhat warm taste; soluble in hot or cold water, and alcohol. Boiling dissipates the essential oil, therefore decoctions should not be used.

MEDICAL PROPERTIES AND USES. Tonic, as well known: strong infusions, puke: externally, used in infusion as a fomentation, and bruised, with hot water, as a poultice.

OFFIC. PREP. *Decoctum Anthemidis Nobilis.* E. D. *Infusum Anthemidis.* L. *Extractum Anthemidis.* L. E. *Oleum Anthemidis.* L.

No. 56.—ANTHEMIS PYRETHRUM. Pellitoy of Spain. *Pyrethrum*—Pellitoy.

OFFICINAL. *Pyrethri Radix.* Lond. Edin. *Pyrethrum Radix.* Dub. Pellitoy Root.

Cabinet specimen, Jeff. Coll. No. 66—figure of the plant, No. 67.

Native of the Levant, Barbary, and the South of Europe.

QUALITIES. *First* taste, on chewing, insipid—*after*, hot, and giving a prickling sensation to the tongue and lips, which continues a few minutes. The pungency depends on a fixed oil deposited in the vesicles of the bark; alcohol and sulphuric ether dissolve the essential qualities.

MEDICAL PROPERTIES AND USES. Stimulant; an *external* sialagogue; may be called a masticatory—chewed, relieves head-ache, tooth-ache, and rheumatism of face; has been used for chronic ophthalmia. By its direct stimulus, is useful in paralysis of the muscles of the tongue and throat—therefore, may relieve aphonia. Never used internally.

No. 57.—ANTHEMIS COLULA. May weed—wild chamomile—stinking chamomile, &c.

A common weed every where; pukes, purges, and poisons children's hands, in its fresh state. See, for a full account, W. P. C. Barton's Veg. Mat. Med. U. S. Vol. I.

Cabinet specimen, Jeff. Coll. No. 68—figure of the plant, No. 69.

No. 58.—ANTIMONIUM—Στιμμι. *Stibium*, Antimony.

Cabinet specimen, Jeff. Coll. No. 70.

The term antimony was formerly given to an ore, in which antimony was combined with sulphur; but it is now solely appropriated to express the pure metal. It is found in va-

rious parts of the world, in different states of combination —as metallic, at Staiberg in Sweden, and Allamont in France; it is thus often combined with iron and silver, with sulphur—the first called native antimony; the second, grey sulphuret of antimony. It is also found oxidized, combined with oxide of iron, forming—1, white antimony—2, antimonial ochre—3, red antimony. The grey sulphuret, is the ore which yields the greatest quantity of antimony in a pure state. In this state of purity, it is white, of a bluish shade, brilliant, and very slowly tarnished in air of a low temperature. Texture foliated, moderately hard; brittle and pulverulent. It is fusible at 809°; in a higher temperature, it volatilizes in close vessels; but if exposed to the air, is very rapidly oxidized. It decomposes water when ignited, and is oxidized by, and combines with, the sulphuric, nitric, and muriatic acids.

Officinal. *Antimonii Sulphuretum*. Lond. *Sulphuretum Antimonii*. Edin. Dub. & U. S. Sulphuret of Antimony, **commonly called Crude Antimony.**

Cabinet specimen, Jeff. Coll. No. 71.

Comes in conical loaves; it is then grey ore separated from its natural impurities; externally, dark grey, internal structure, bladed, brilliant. Found in masses, and crystallized, in Hungary, Saxony, France, Tuscany, Spain, and Cornwall in England.

Qualities. Inodorous, insipid, steel colour, stains the fingers; insoluble in water and alcohol; exposed to air, loses brilliancy; slightly acted on by vegetable acids; hence wine was formerly put into cups made of it, to give it an emetic quality; with heat, decomposes sulph. and nitr. acids; cold muriatic acid decomposes it.

Medical Properties and Uses. Inactive, if the stomach contain no acid; if that be present, acts with vehemence; hence uncertain, and little used. Diaphoretic; in large doses, nausea and vomiting; used in gout and rheumatism, scrofula, and other glandular diseases. Chief use, in the preparation of antimonials. Dose, grs. x to ʒj, or exceeding that, if tolerable to the stomach.

An ingredient in *Spilsbury's Drops*. According to Dr. Duncan, is an Irish quack remedy, externally, for cancer. Used in veterinary practice, and mixed with horse's foot to improve the coat. Turkish ladies paint their eyelashes black with it, to soften the lustre of the eye by contrast. (Shaw, Russel, Chateaubriand, Dr. Badham.)

Sophistications.—Lead renders its texture foliated, instead of bladed, and retards its vaporization. Arsenic detected by garlic odour thrown on live coals. Manganese and iron,

prevent vaporization; mostly adulterated with *smithy-dust*, the scoriæ, or black oxide of iron.

Offic. Prep. 1. By trituration. *Sulphuretum antimonii præparatum.* E. D. & U. S. 2. By the action of heat with the phosphate of lime (oxydized.) *Pulvis antimonialis.* L. D. & U. S. *Oxidum antimonii cum phosphate calcis.* E. 3. By the action of alkalies (oxydized.) *Antimonii sulphuretum præcipitatum.* L. E. & U. S. *Sulphur antimoniatum fuscum.* D. 4. By the action of acids (oxydized.) *Antimonii oxydum.* L. U. S. *Oxydum antimonii nitro-muriaticum.* D. *Antimonium tartarizatum.* L. U. S. *Tartaris antimonii*, olim *tartarus emeticus.* E. *Tartarum antimoniatum*, sive *emeticum.* D. *Liquor antimonii tartarizati.* L. *Vinum tartritis antimonii.* E. *Vinum antimonii tartarizati.* U. S. *Antimonium vitrificatum.* U. S. *Antimonii oxydum vitrificatum.* U. S. *Antimonii vitrificatum cum cera.* U. S.

No. 59.—Antimonii Sulphuretum Præcipitatum. L. E. & U. S.

Synonym, Sulphur Antimoniatum fuscum. D.

Precipitated Sulphuret of Antimony.

Cabinet specimen, Jeff. Coll. No. 72.

Qualities. Brilliant orange-coloured powder; inodorous; taste slightly styptic; insoluble in water.

Medical Properties and Uses. Diaphoretic, cathartic, emetic, according to the dose; an uncertain medicine; combined with mercury, used in cutaneous diseases.

Incompatible with it are all acids; and acidulous salts increase its emetic powers—if acid is present in *primæ viæ*, unite soap or magnesia with it. Dose, 1 to 5 grains, in pills.

Sophisticated with chalk; should not effervesce with acids; should vapourize with heat, and be of a bright orange yellow. Sulphur, and sulphuret of antimony, coloured with Venetian red, is sold for it.

Offic. Prep. *Pillulæ hydrargyri submuriatis.* L.

Formula. ℞ Extract Aconiti
Antimonii Sulphureti, Præcipitati, āā gr. j
Magnesiæ Carbonatis, ℈ss
} Rubbed together into a powder.

No. 60.—Antimonii Vitrum. L. Glass of Antimony.

Cabinet specimen, Jeff. Coll. No. 73.

A vitrified protoxide of No. 59, combined with some undecomposed sulphuret, from which it is prepared—an acrid, harsh, uncertain medicine, never now used, except to make

Offic. Prep. *Antimonium Tartarizatum*, and *Oxydum Antimonii vitrificatum cum cera.*

No. 61.—Antimonium Tartarizatum. L. & U. S. *Tartris Antimonii.* E. *Tartarum Antimoniatum.* D. Tartar Emetic.

Cabinet specimen, Jeff. Coll. No. 74.

Qualities. White, inodorous powder; taste slightly styptic and metallic; exposed to air, slightly effloresces; on burning coals, becomes black, and renders metallic antimony. Pure, is soluble in three times its weight of water, at 212° —in fifteen times, at 60°, the solution clear, transparent; long kept, is decomposed.

Incompatible with it, mineral acids, alkalies and their carbonates, most metals, soaps, hydro-sulphurets, and many bitter and astringent vegetable infusions and decoctions—Example—f℥j decoct. yellow bark, decomposes ℈j of tart. emetic, and renders it inert. "The compound of tartarized antimony and bark, is said to purge, and constitute the *Bolus Quartanus* of the French physicians." *Paris.* Rhubarb is incompatible. Not decomposed by infusions of wormwood or gentian. Pure alkaline sulphates not incompatible—with excess of acid they are, as alum, bisulphate of potass, &c. The emetico-purgative of the French, consisted of the glauber salt and tartar emetic in solution. Perfectly compatible, and an excellent antifebrile remedy.

Sophisticated—M. Sexullas, in Journal Pharmacien for 1821, shows that unless it is carefully crystallized, tart. emetic contains more or less of arsenic; should always be purchased in crystalline form; a solution in distilled water ought to furnish a copious gold-coloured precipitate, with sulphuret of ammonia.

Medical Properties and Uses. Solution, best form; emetic, cathartic, diaphoretic, according to mode of exhibition: $\frac{1}{4}$ grain is diaphoretic—$\frac{1}{2}$ grain opens the bowels and the skin—1 grain will vomit, purge, and sweat; acts as an expectorant, in one-sixteenth and one-twelfth of a grain. The best, most manageable and most certain of all antimonial preparations; an indispensable searching emetic; enters into the Mel scillæ compositum, Phar. U. S. called Hive Syrup—every ounce contains one grain. Externally applied, by sprinkling 5 or 10 grains over a Burgundy pitch or adhesive plaster, or as in formula annexed, is a pustula-

ing irritant. I recommend this strongly to you, for its efficaciousness in removing deep seated pains of chest, &c. The tart. emetic ointment, rubbed along the spine, is useful in chorea and similar affections.

Offic. Prep. *Liquor Antimonii Tart.* L. *Vinum Tartratis Antimonii.* E. *Vinum Antimonii Tartarizati.* U. S. Antimonial wine—contain 1 grain to the f℥ss. Formula - ℥iss or ℥j tart. emetic, triturated with lard ℥j, makes a powerful *Pustulating irritant.*

No. 62.—Apocynum Cannabinum, } Dog's-
Apocynum Androsæmifolium, } bane.

Cabinet specimen, Jeff. Coll. No. 75—figure of the plant, Nos. 76 and 77.

See Inaugural Dissertation of Dr. Knappe, a graduate of Jefferson College.

No. 63.—Aqua. Water.

1. Rain water, *Aqua pluvialis.* 2. Spring water, *Aqua fontana.* 3. River water, *Aqua ex flumine.* 4. Well water, *Aqua ex puteo.* 5. Snow water, *Aqua ex nive.* 6. Lake water, *Aqua ex lacu.* 7. Marsh water, *Aqua ex palude.*

No. 64.—Aqua Distillata. L. E. D. & U. S. Distilled water.

Used in pharmaceutical preparations; should be used in extemporaneous prescriptions, when the formula contains *sulphuric* or *citric acid; tartar emetic; lunar caustic; cuprum ammoniacum; ferrum tartarizatum; corrosive sublimate; aqua ammonia; liquor plumbi acetatis; liquor potassæ; plumbi super-acetas; solutio muriati; barytæ vinum ferri; sulphate of zinc; sulphate of iron.*

No. 65.—Aqua Marina. Sea water.

One pint contains, lime 2.9; soda 96.3; sulphuric acid 14.4; muriatic acid 97.7; total 226.1 grains. Contains in its forms of combination set down by Murray, muriates of soda, magnesia and lime, and glaub. salt.

Medical Properties and Uses. A pint is a cathartic. I have innumerable times prescribed it for my sick at sea, and can attest the certainty of its operation; a bath of sea water is important in many diseases.

No. 66.—Aquæ Distillatæ. L. D. *Aquæ Stillaticæ.* E. Distilled waters.

Waters impregnated with the essential oils or vegetable ... used as vehicles for other remedies; see dispensatories. May be extemporaneously made, by adding water to *essences*, (which are essential oils, alcohol and sugar, or magnesia.) The essential oil is triturated with ten times its weight of sugar or magnesia, and the alcohol added: so prepared, they are not transparent.

No. 67.—Aquæ Minerales. Mineral waters.

Divided by Paris into four classes:—

1. Acidulous; 2. Chalybeate; 3. Sulphureous; 4. Saline

The public spring of Ballston contains, muriate of soda, and carbonates of soda, lime, magnesia, and iron; temperature, 50° F.

Law's Spring the same, in different proportions: temperature, 52° F.

New Spring the same, in different proportions; temperature, 50° F.

Saratoga—Congress Spring the same, in different proportions; temperature, 50° F.

Columbian Spring the same, in different proportions; temperature, 50° F.

High Rock Spring the same, in different proportions; temperature, 48° F. The other springs, at the same place, nearly the same.

No. 68.—Aralia Nudicaulis—(the root.) Phar. U. S. False sarsaparilla. Indigenous.

Cabinet specimen, Jeff. Coll. No. 78.

No. 69.—Aralia Spinosa—(cortex.) Phar. U. S. Angelica tree. Indigenous.

Cabinet specimen, Jeff. Coll. No. 79.

No. 70.—Arctium Lappa—(burdock.) The leaves and root, used in domestic practice.

Cabinet specimen, Jeff. Coll. No. 80—figure of the plant. No. 81.

No. 71.—Arbutus Uva Ursi. Trailing Arbutus or bear-berry.

Officinal. *Uvæ ursi folia.* L. D. *Arbuti uræ ursi folia.* E. Leaves of uva ursi, bear-berry, or trailing arbutus. *Arbutus ura ursi folia.* U. S.

Cabinet specimen, Jeff. Coll. No. 82—figure of the plant. No. 83.

[illegible] gonorrhœa, syphilis, mercurial ptyalism, tetanus, and epilepsy.

Quantities. Fresh leaves, tenderness; slightly bitter and astringent, leaving an after taste of sweetness. Dose, [illegible] like green tea. Water and alcohol extract the virtues. According to Mehaud and Morin, the leaves yield tannin, sugar, bitter principle, gallic acid, some resin, lime, and its oxygen acid extract.

Medical Properties and Uses. Astringent, demulcent, and lithic; used in dyspepsia—Powder considered by Dr. Barton's prophylactic against contagion by Measles. Dose of powdered leaves, 3j to 3ij, two or three times a day. Ferrar's dose was 5 grains.

No. 72.—Argenti Nitras. L. *Nitras Argenti.* E. D. & U. S. Fused nitrate of silver. Olim officinally, and now commonly, Lunar caustic.

Cabinet specimen, Jeff. Coll. No. 84.

Quantities. In small cylinders, of a dark gray colour, crystalline in fracture, odourless, taste intensely bitter, acrid, and caustic; corrosive, stains the skin indelibly black, (and to purge it when internally taken,) [illegible] soluble in alcohol and an equal weight of water, at 60° F.

Incompatible with fixed alkalies, and alkaline earths, with muriatic, sulphuric, and tartaric acids, and all their salts; with soaps, gums, hydrosulphurets, astringent vegetable infusions, and distilled waters.

Uses, preparations, &c. Dyes nail, grey, or purple hair, or light colours, black, by diluted solution; also used to blacken [illegible] with, some particularly, by ladies as a fine flour [illegible]. Preparations for these purposes are sold by the perfumers.

Medical Properties and Uses. Tonic, astringent, and sedative in epilepsy and such affections, and in dyspepsia, a useful adjunct to cold pills. Dose, one eighth to one grain, and from that to many grains, according to circumstances. Very large doses may be given with impunity. Should be made into pills with crumb of bread, and [illegible] sugar, to prevent their getting [illegible]. Taken internally, the urine will be [illegible]. Externally, all escharotics are [illegible] well known; employed when a large eschar is not wanted.

No. 73.—Aristolochia Rotunda—Radix.

Cabinet specimen, Jeff. Coll. No. 33—figure of the plant, No. 86.

No. 74.—Aristolochia Longa—Radix.

Cabinet specimen, Jeff. Coll. No. 87—figure of the plant, No. 88.

No. 75.—Aristolochia Serpentaria. Virginia snake-root. *Serpentaria*—the root.

Cabinet specimen, Jeff. Coll. No. 89—figure of the plant, No. 90.

Indigenous; an aromatic stimulant. See W. P. C. Barton's Vegetable Materia Medica, U. S. Vol. II.

No. 76.—Armoraciæ Radix. L. E. Horseradish. The root. *Raphanus Rusticanus.* D. *Cochlearia.*

The root of *Cochlearia Armoracia*—a tetradynamous plant.

Qualities. Taste hot and acrid, as well known, being edible, and a condiment; odour pungent. Its virtues depend on an essential oil. Water and alcohol extract its active principles—coction dissipates them.

Medical Properties and Uses. A stimulant. Used in dropsies, by Sydenham. Recommended by Cullen, for hoarseness depending on relaxation, in form of syrup—given in substance, scraped, or in infusion. Dose—in substance, ℥j—in infusion, ℥j. Withering recommends the infusion as a safe cosmetic.

Incompatible with alkaline carbonates, corrosive sublimate, nitrate of silver, infusion of gall, and yellow cinchona bark.

Offic. Prep. *Infusum Armoraciæ comp.* L. *Spiritus Armoraciæ comp.* L. D. *Infusum Armoraciæ.* U. S.

No. 77.—Arnica Montana.—Leopard's bane—The root, plant, and flowers. E. D. & U. S.

A syngenesious plant, found in some of our shops, but rarely used.

Cabinet specimen, Jeff. Coll. No. 91—figure of the plant, No. 92.

Medical Properties and Uses. Errhine, narcotic, diaphoretic; in large doses, emetic and cathartic. Root, aromatic tonic. Flowers used in paralysis, amaurosis, gout, rheumatism, chlorosis, diarrhœa, dysentery, and convulsive diseases. Its stimulant operation said to prove, in the latter, injurious. The root is used by French physicians as an excellent tonic, in paralysis. Used in Germany, as a succedaneum for cinchona, for intermittents, putrid fevers, and gangrene. May be used in substance or infusion, by macerating ℥iss of leaves and flowers, or ℥ij of the bruised

root, in f℥xij of boiling water, and straining through muslin. It soon ferments. Dose of infusion, f℥j, three or four times a day—of the powdered root, grs. v. to grs. x.

No. 78.—Argemone Mexicana. L. *Brumadundoo* of East India.

Class, *Polyandria*. Ord. *Monogynia*. Nat. ord. Linn. *Rhœadeæ*.

Cabinet specimen, Jeff. Coll. No. 93—coloured figure of the plant, No. 94.

Native of Mexico, Jamaica, the Caribbee Islands, and India.

The bitter yellow *proper* juice of this thorny plant (cultivated in most of the large gardens of the United States, and found in great luxuriance in the gardens of Messrs. Landreth, near this city) is considered by the Indians as a valuable remedy in ophthalmia, dropped into the eye, and over the tarsus: and as a good application to chancres. The juice is glutinous, and turns bright camboge colour in the air. The seeds, in the West Indies, are used as substitutes for ipecacuan, according to Dr. Wright. An oil, prepared from the small dark-coloured seeds, called *Brumudundoo unnay*, is used by the Hakeems (Mahometan doctors) as an external application, in head-aches induced by exposure to the rays of the sun. The Vitians recommend it for scald head. It is purgative, and used also for burning in lamps. According to Long, (History of Jamaica,) the seeds are a stronger narcotic than opium.

A good subject for an inaugural thesis.

No. 79.—Arsenicum Album. (*Acidum Arseniosum.*) *Oxydum Arsenici.* E. *Arsenici Oxydum.* L. *Arsenicum.* D. *Acidum Arseniosum.* U. S. White Arsenic. Arsenious acid, called **Arsenic.**

I adopt the U. S. officinal name.

Cabinet specimens, Nos. 95, 96, 97, 98.

Obtained in Bohemia and Saxony, in roasting the cobalt ores, in making zaffre, and sometimes by sublimation from arsenical pyrites. The roasting is performed in furnaces with long flues, in which the impure oxyde is condensed. This is purified by sublimation—performed by putting large quantities of impure arsenic into heated cast-iron boxes, of a square form, with conical heads luted with clay. When the oxyde has been sublimed in these heads, they are separated, and the oxyde is struck off. The arsenious acid, thus obtained, is a dense, semi-transparent, solid cake, which becomes opaque; of a snowy whiteness;

pulverulent when exposed to the air. Met with in both these forms, in the shops; often sold in powder, a state in which it is adulterated with chalk, &c.

The semi-vitreous lumps of arsenic break with a conchoidal fracture, and, reduced to powder, resemble loaf-sugar.

Qualities. Acrid and corrosive taste, but not in a degree corresponding to its virulence; *after* taste, sweetish. In vapour, inodorous, though said to give out the smell of garlic; the alliaceous smell is now known to be confined to metallic arsenic in vapour. When arsenious acid seems to yield this odour, it is an evidence of its decomposition. This occurs when heated and projected upon ignited charcoal, or heated in contact with metallic bodies which readily unite with oxygene, as antimony and tin. It is stated by Orfila and other chemists, that when projected on heated copper, the alliaceous odour is evolved. Paris has proved that this only takes place when the copper is heated to a state of ignition, and that if a few grains of the oxyde be heated by a spirit-lamp or blow-pipe, upon a cold plate of copper, no alliaceous odour is perceptible: the whole of the acid being dissipated before the copper can be sufficiently heated to de-oxydize it. Heated on a plate of zinc, the smell is not evolved until the metal is in fusion. If gold, silver, or platinum, be used with the same process, no smell is given off at any temperature. Paris remarks, that the flame of the spirit-lamp itself is capable of decomposing the oxyd, in consequence of the operation of its hydrogen—a fact which is very likely to betray the chemist into the belief, that the oxyd does really give off the odour in question. It has been supposed, that the arsenical vapours which yield this odour, are not so pernicious as those which are inodorous—a fact, which has been assumed by Paris, to account for the circumstance mentioned by Dr. Percival, that workmen who solder silver filigree with an arsenical alloy, are never affected by the fumes. Dr. Percival mentions, that the men thus employed enjoy as good health, and live as long, as other artists. He mentions having seen a man at the "Soho, at Birmingham, of more than fifty years of age, who had soldered silver filligree for thirty-five years, and had regularly, during that period, passed from eight to ten hours daily in his occupation; yet he was fat, strong, active, cheerful, and of a complexion by no means sickly. Neither he nor his brother artists used any means to counteract the effect of their trade." Dr. Rotherham, in his comments upon this fact to Dr. Percival, seems to think, without accounting in any way for the escape of the workmen, that "the fumes of this very volatile and caustic mineral may

be very prejudicial;" while Dr. Paris believes, that the fact that arsenious acid is really decomposed when brought in heated contact with an oxidable metal, is reason sufficient to explain why the fumes of the alloy in question are disarmed of their virulence. (Pharma.) Arsenic possesses many of the habitudes of an acid—it combines with pure alkalies to saturation, and hence is now properly denominated arsenious acid. It may be further acidified by being distilled with nitrous acid, and the compound which is the result is a white concrete, termed *arsenic acid*.

According to Proust and Davy, arsenious acid consists of about 25 of oxygen, and 75 of metal; and the arsenic acid, of 33 of oxygen, and 67 of the metal; or, the quantity of metal being the same, the oxygene in the arsenic acid is to that in the arsenious acid, as 3 to 2. Of the solubility of arsenious acid, Klaproth has shown that it requires 400 parts of water at 60°, and only 13 parts at 212°; and that if 100 parts of water be boiled on it, and suffered to cool, the fluid will hold three grains in solution, and deposite the remainder in tetrahedral crystals —hence the necessity of using boiling water, in every chemical examination of substances supposed to contain arsenic. This substance is soluble in alcohol and oils, the former taking up 2 per cent. With lime-water, it produces a white precipitate of arsenite of lime, which is soluble in an excess of arsenious acid. With magnesia, it forms a very virulent soluble arsenite. (Paris.) On the simple watery solution of the oxyde, no change is produced by a solution of copperas, corrosive sublimate, tartar emetic, the mineral acids, or the alkalies. Nitrate of silver throws down a yellowish precipitate, which gradually passes to a brown colour; a white precipitate is produced by the super-acetate of lead. Lime-water precipitates it white; sulphurets of the alkalies, pale yellow; and sulphuretted hydrogen gas, a golden colour.

Sophisticated with chalk, gypsum, and sulphate of barytes; detected by not being volatilized by heat, or an insoluble residuum being found in preparing Fowler's solution.

Antidote. After all the attempts at discovering one, it appears there is none. The sulphuret of potass, the last lauded antidote, has failed. The best and only antidote is to get it out of the stomach, if we can, by every means to be pointed out in the section (F) of these lectures. If we cannot do that, why, even so, it is no disgrace to be foiled by *arsenic!*—but it is one to *dilly-dally* with fallacious chemical *supposed* antidotes—while arsenic is more engaged in its own proper business, when it unluckily gets into the stomach, than we may be with ours, when, called to fight it,

we irresolutely and culpably stand *pow-wowing* with *antidotes*. I have lost two patients, (suicides,) who took rats-bane, (*arsenious acid*,)—the last, a German redemptioner in the Alms-House. I have nothing on my conscience, as I should have had, if I could have believed in antidotes for this poison. I recovered, in 1823, a whole family, in this city—old Col. Archibald Steele (of the Revolution,) his daughter and son-in-law (Mr. and Mrs. Palmer,) and their child, who had been poisoned by arsenic, murderously mixed with a chicken-pye—by ipecacuanha in enormous doses, and incredible quantities of warm water. They were all in imminent jeopardy, particularly the child, whom I thought dying, for an hour. The supposed antidotes were hard by, in an apothecary's shop; but I preferred the plan just mentioned, and perseverance in it, by puking the patients as long as I dared to do, even to alarming prostration—and producing reaction by wet stimulating frictions.

These facts are mentioned, to impress on your minds the inefficacy of any but common-sense practice, in poisoning from arsenic. I think *antidotes* would have killed this family.

Medical Properties and Uses. Arsenic, under various forms, has been employed from a very early period. Strictly speaking, it is an Oriental medicine, having been in vogue immemorially in India, and indeed all over the East, as a most powerful alterant. It was probably introduced into European practice, by the medical students, under the brilliant Caliphate of Bagdad; and seems to have been first appropriated to the cure of intermittents, by the Jewish physicians of Poland.

Used, in the time of Sir George Baker, with opium, in intermittents. The influence of his writings, and those of French physicians, was exterminated from physicians' bottles. Yet, under the French Directory, a preparation, similar to Fowler's solution, formed a part of the political constitution of the day; and by an edict, the surgeons of the Army of Italy were *commanded* to cure the soldiery, of agues caught in the marshes of Lombardy, by this remedy, under pain of military punishment. Has any one ever heard of any dogmatism, equal in absurd exercise of authority to this—save, indeed, something like it in the opinion of Sir James M'Gregor, Director General of the medical staff of the British army, who has asserted, that every surgeon, or other medical officer of the army, ought to be compelled, by an edict of the Lords Commissioners, to believe in contagion!!! In its reguline state, arsenic is inert, or nearly so, on the system—oxygenized only, it is

deleterious. Pure arsenic, or the regulus, is therefore never medically employed.

In the East Indies, arsenic is used by the native physicians, to cure what they call Persian fire (confirmed lues;) and a species of elephantiasis, called by them *judham;* and also to cure the bite of the *cobra de capello*, or hooded snake. They unite it with six parts of black pepper, into pills.

Arsenic is a medicine of great efficacy and power, and is extensively employed by practitioners all over the world. It is tonic and febrifuge; has been long used in dropsy, syphilis, intermittent and remittent fever, periodical and sick head-aches, head-aches, rheumatism; intermittent hernicrania, scirrhus, and some local affections of the ends of the bones, cartilages, or ligaments, or all together; glandular obstructions; typhus fever; in some of the neuroses, particularly chorea; some spasmodic affections, as asthma, angina pectoris, whooping cough, tic doloreux. In sick head-ache, arsenic has been used beneficially. There are many persons, females particularly, who are constitutionally liable to perpetual returns of this distressing affection. Dr. Eberle is in error, in stating, in his Therapeutics, that "to Dr. Mease, of our city, we are indebted for the first account of its efficacy, in this painful and troublesome affection." If Dr. Eberle intends, in the above remark, to give the credit of original employment of the mineral, in the disease in question, to Dr. M., the following extract of the MSS. lectures of Dr. Barton, in my possession, shows that *he* suggested its use as a remedy in that arthritic disease, as he called it: "Has arsenic been much used in the *sick head-ache*, to which women, and particularly, perhaps, women of delicate constitutions, are so subject? I have not myself employed arsenic in this distressing affection, which seems, in many cases, to owe its origin to an arthritic diathesis. But I have no doubt, that arsenic will be found a medicine well suited to certain cases of this head-ache." *Lecture on Arsenic.* Dr. Chapman says,* "I have long known its utility in removing the series of affections, as nodes, cutaneous blotches, ulcers of the throat, rheumatic pains, which, though usually ascribed to a venereal taint, are nearly always of mercurial origin." And in a note: "My use of the medicine in these cases, for the credit of having prescribed it originally, I believe due to myself, has been more extensive since the first edition of this work, and in part with a confirmation of its utility."

Now, I deny Dr. Chapman this "*credit of having pre-*

* Therapeutics, Vol. II. p. 478.

scribed it originally" in these affections, without ceremony; but still, with regret that he should have been so reckless as to claim a merit, to which he could not, with the faintest semblance of reason, justify any pretension. Is it not extraordinary, that of this *original practice*, he says not one solitary word in his first edition, though he "*had long known its utility*," &c.—not a word, until after the publications of the writer in the Medical Recorder, on nodes! I refer to Asiatic writers, for the fact I have already mentioned, that arsenic has immemorially been used by the native physicians, to cure confirmed lues. And what is this? What are "nodes, cutaneous blotches, ulcers in the throat," but symptoms of confirmed lues? The author just quoted must be strangely eager to claim originality of practice with arsenic, when he should found that claim upon a point established as a regular Asiatic treatment, near a century ago.

For the same reason, the writer who claims, in the 3d vol. of the Amer. Med. Rec. originality in using arsenic in venereal nodes, must he acknowledged to be entitled to no such originality. But in reference to Dr. Chapman's claim, (which he thinks of some importance, or he would not mention it,) we need not travel to Asia, to show its futility. His words are plain enough; and though qualified by the salvo, "I believe due to myself," still, is it not surprising that he could believe any such thing, educated as he was, in the school where Dr. Barton taught materia medica for more than twenty years—and as he graduated in that school, he must have attended two courses of the Doctor's lectures. Dr. Barton says, "I have had under my care a most violent and obstinate case of rheumatism, which seemed to owe its origin to syphilis, but which mercurials would not cure, which yielded in a short time completely to the use of arsenic." Again: "We sometimes meet with venereal cases, to the entire cure of which mercury seems unequal. Such are some of the disagreeable and distressing ulcers, which sometimes remain after the opening of venereal buboes; in these cases, arsenic will often do more good than any other medicine. I mean, arsenic given internally, either in the shape of pills, or Fowler's solution. At the same time, it may be necessary, in some cases, to wash the surface of the ulcer by means of a weak solution of arsenic. For we have not yet discovered the medicine, which more disposes sores of different kinds to form a good pus, than arsenic. I might, with some propriety, dwell still further on the employment of arsenic, in venereal cases. Such as chronic *venereal blotches of the skin*, the leprous-like affections of the skin, originating from syphilis, and the like. But I shall conclude, here,

this part of my subject by remarking, what indeed I have already hinted at, that arsenic, given internally, is *admirably adapted* to the treatment of many cases of *visceral rheumatism*." Barton's MSS. lectures.

It remains now to notice the external use of arsenic. Since the latter end of the last century, the escharotic powers of this mineral have been relied on in the healing disease of cancer. There is little doubt, that in certain cancerous ulcers, it has effected cures; the peculiarities of these will be given in the details of the lectures on this substance. It constitutes the basis of nearly all the nostrums for cancer. It forms, with sulphur, a species of rament (q. v.), and sinking material. *Plunkett's ointment* (the *Pate Arsenical* consists of 70 parts of ramment, 30 of *sanguis draconis*, and arsenious acid, made into a paste with saliva, at the time of applying it—it is a similar preparation to the *Pulvis anti cancrosus* of father Ignatio. *Acton's Cancer Powder* (*Pulvis Arsenicalis Compositus*) with lard, or pharmaceutical ointment, is *Singleton's Eye-Salve*, or *golden ointment*. Dr Paris says, that in England, the red precipitate ointment is sold under the same names. Arsenic also forms the bases of several French blistering cerates. *Martin's Cancer Powder* was believed by Dr Rush and Dr. Barton, who examined it, to be composed of arsenic and *Epilobium Virginianum*.

Internally administered, arsenic soon discovers its curative effects, and it should be laid aside, after the aggregate doses which have been taken amount to two or three grains. It produces an erythematous affection, first noticed by Plenciz, as affecting the face; and afterwards particularly noticed and described by Dr. Barton, under the name of *Œdema Arsenicale*. He taught that this effusion in the legs was not a dangerous symptom, but one evidencing that *constitutional effect* on the system, to which we are to look for all its efficacy. The modes of employing arsenic, are, in substance, combined with opium: Fowler's solution, which is an arseniate of potash; the sublimed oxyde, or prepared oxyde of the London College; and Lefebre's solution. Dose, in substance, one sixteenth of a grain; of Fowler's solution, (*Liquor Arsenicalis*,) from 5 to 15 drops. Lefebre's solution contains 4 grains to the pint of distilled water—its dose may be regulated by the preceding. Dupuytren uses an ointment of 120 parts of calomel and 1 part of arsenic, in *nodi tangere*.

PHARM. PREP. *Liquor Arsenicalis*. L. *Liquor Potassæ Arsenitis*. U. S. Arsenical Solution. *Arsenici oxydum album*. L. Prepared oxyde of arsenic.

No. 80.—Areca Catechu. Drunken date tree.

The betel-nut tree yields two inferior kinds of Catechu, called *Cuttacamboo* and *Cashcuttie*, in India. The first is brought in finest quality from Pegu—is of a light brown colour, slightly bitter taste, and powerfully astringent. This substance has long been confounded with the real Catechu of the Acacia Catechu. The better sort of natives chew it with their betel leaves. The *Cashcuttie* is of an inferior quality, almost of a brown black colour, hard, extremely bitter, and much less astringent than the *Cuttacamboo*. The poorer classes of natives chew it with their betel leaves. Taken into India from Asheen and Pegu. Both, of an inferior quality, are made in Mysore, and are prescribed by the Vitians in bowel complaints, and externally in a sphacelous ulcer—a common and destructive affection in India—easily arrested in its progress, according to Whitelaw Ainslie, by the external application of Balsam of Peru.

No. 81.—Arrow Root. The nutritive fecula of *Maranta Arundinacea*, which see. It is also prepared from potatoes: see *Solanum tuberosum*.

No. 82.—Artemesia.

Cl. 19. Ord. 2. *Syngenesia superflua*. Nat. ord. *Compositæ Nucamentaceæ*, Linn. *Corymbiferæ*, Juss.

Cal. imbricate, with roundish converging scales. *Cor.* without rays.

Six species—

1. *Artemesia Abrotanum*. Southernwood.
2. *Artemesia Santonica*. Tartarian Southernwood.
3. *Artemesia Maritima*. Sea wormwood.
4. *Artemesia Absinthium*. Common wormwood.
5. *Artemesia Sinensis*.
6. *Artemesia Lanuginosa*. Woolly wormwood.

No. 83.—Artemesia Abrotanum.

Cabinet specimen, Jeff. Coll. No. 99—figure of the plant, No. 100.

Officinal. *Abrotanum; Folia*. Dub. Southernwood leaves.

A small perennial shrub, native of south of Europe, Siberia, China, and Cochin-China.

Qualities. Strong fragrant odour; nauseous bitter taste—water and alcohol extract its virtues.

Medical Properties and Uses. Tonic diaphoretic—reputed vermifuge; externally, as a fomentation for inflammations, pains, tumours, and gangrenous ulcers. Rarely used, except in domestic practice. Dose of leaves, ℈j to ʒj, of an infusion made with ʒvj of the leaves, fʒx water —a cupful twice a day.

No. 84.—Artemesia Santonica.

Officinal. *Artemesiæ Santonicæ Cacumina.* Edin. *Santonicum; cacumina.* Dub. The tops of Tartarian Southernwood.

Cabinet specimen, Jeff. Coll. No. 101—figure of the plant, No. 102.

Native of Tartary and Persia—same properties as No. 83; yields worm-seed of older pharmacopeias, (*semina santonica.*)

No. 85.—Artemesia Maritima.

Officinal. *Absinthium Maritimum; cacumina.* Dub. The tops of sea wormwood.

Indigenous to England. Slightly fragrant; taste bitter, and slightly aromatic. The properties same as No. 86, but weaker.

No. 86.—Artemesia Absinthium.

Officinal. *Absinthium.* Lond. *Artemesiæ Absinthii Folia et Summitates.* Edin. *Absinthium Vulgare; folia, cacumina.* The leaves and flowering tops of wormwood.

Cabinet specimen, Jeff. Coll. No. 103—figure of the plant, No. 104.

Native of England, and other countries of Europe; extensively cultivated in this country, in gardens.

Qualities. Taste intensely bitter, (hence the by-phrase, bitter as gall and wormwood;) odour strong, sub-fragrant, peculiar, and disgusting. Water and alcohol take up its properties.

Medical Properties and Uses. Tonic, anti-spasmodic, anthelmintic; extremely discutient; possesses a narcotic property, which coction dissipates. Dose, in substance, ℈j to ℈ij; and of the infusion made by macerating ʒvj in fʒxij of water, fʒj to fʒxij, three or four times a day.

No. 87.—Artemesia Sinensis, } Native of
Artemesia Lanuginosa, } China.

The down of the leaves, formed into small cones, is the Moxa, imported from China. See *Moxa.*

All of the species of Artemesia owe their virtue to a resin and an essential oil. No. 86 is the only important one, and it ought not to have been omitted in the Phar. U. S. There are other species, called herbs, used in domestic practice—as *Artemesia Vulgaris*, (Mugwort,) the tops of which are used in local baths, for suppressed catamenia—mixed with rice and sugar, the Chinese women use them as a pessary. *Artemesia Pontica*, (*Absinthium Romanum*,) is the true Roman wormwood. No. 85 is called common Roman wormwood. *Artemesia Rupestris* is Alpine wormwood. The French use *Artemesia Dracunculus*, called *Tarragon*, as a stimulating potherb, and to flavour vinegar. The Creoles of Louisiana use it in their *gumbo*, a heavy, stimulating, mucilaginous soup. The whole family is a natural assemblage, and allied in properties.

No. 88.—Arum Maculatum. Wake-Robin. Cuckoo Pint. Arum. The root. Yields sago.

Synonyms—Serpentaria Minor.
Zingiber Album.
Zingiber Germanicum.
Zingiber Barbe Aaronis—Aaron's-beard.

Cabinet specimen, Jeff. Coll. No. 105—coloured figure of the plant, No. 106.

Qualities. Root saponaceous, acrid, amylaceous. The acridity of this plant is possessed, in common with all of the *Aroideæ*; and from its saponaceous quality, it has been used in washing, instead of soap; the acridity of it, however, unless carefully washed away, chops the hands of the laundresses. When thoroughly washed from the root, and a similar process pursued as in making starch, it yields a fine amylum. This is made into a sago by the inhabitants of Portland Island, where it is abundant. I suspect that some of the varieties of sago, in our shops, are obtained thence.

Medical Properties and Uses. Stimulant diaphoretic; grs. x to ℈j of the fresh root, made into an emulsion with gum Arabic and spermaceti, taken three or four times a day, has been useful in obstinate rheumatisms. Its congener, No. 89, is an indigenous plant, worth attention, being nearly allied to this. The Indians use the leaves of another congener, *Arum dracontium*, in cases of dropsy, covering their patients with the leaves, which vesicate.

No. 89.—Arum Triphyllum. Radix. Phar. U. S. Indian turnip; called also, Dragon-root.

Cabinet specimen, Jeff. Col. No. 107—figure of the plant, No. 108.

Indigenous; root acrid, stimulating, poisonous; used, boiled in milk, to relieve oppression in phthisis—said to be useful; is a common domestic remedy; the acridity of the root renders it powerfully rubifacient, applied bruised to the skin. By maceration and frequent ablution, yields a fecula resembling arrow-root.

No. 90.—Asarum Europæum.

Officinal. *Asari folia.* L. E. D. *Assarabacca leaves.*

Cabinet specimen, Jeff Coll. No. 109—figure of the plant, No. 110.

Native of England.

Qualities. Recent leaves, nauseous, bitter, acrimonious, violently purgative and emetic; impaired by keeping; contain a peculiar acrid principle, not well understood. Infusion in water takes up the properties; coction dissipates them.

Medical Properties and Uses. Errhine, Cullen says, the best; grs. iij to v, snuffed up the nose every night, till the effect is produced.

Offic. Prep. *Pulvis Asari compositus.* E. D.

No. 91.—Asarum Canadense. Radix. The root of Canada snake-root, or wild ginger. Phar. U. S.

Alcohol and water extract its virtues.

An indigenous aromatic congener of No. 90. For detailed account, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. II.

Dose, ℈ss of the powdered root—or ℥ij of infusion, prepared by f℥xij of boiling water, with ℈ss of the root. May be used as Virginia snake-root is.

No. 92.—Asclepias. Milk-weed; silk-weed.

Pentandria Digynia, Linn. *Contortæ*, Juss.

Three species, indigenous—

1. *Asclepias incarnata.* Flesh-coloured Asclepias. The root.

Cabinet specimen, Jeff. Coll. No. 111—figure of the plant, No. 112.

2. *Asclepias Syriaca.* Common silk-weed; milk-weed. The root.

Cabinet specimen, Jeff. Coll. No. 113—figure of the plant, No. 114.

3. *Asclepias tuberosa.* Butterfly-weed; pleurisy-root; wind-root. The root. Phar. U. S.

Cabinet specimen, Jeff. Coll. No. 115—figure of the plant, No. 116.

For Nos. 1 and 2, see Dr. Ansel W. Ives' edition of Paris's Pharmacologia, under those names. For No. 3, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. II.

A diaphoretic; used in pleurisy. Dose of powered root, ℈j to ʒss—of the decoction, prepared by boiling ʒss of the bruised root in Oj of water, fʒj every second hour, till it sweats, or till it nauseates.

Asclepias vomitoria. (Kœnig.) *Coorinja* or *Cocrinja.*

Asclepias asmatica. (Willdenow.)

Marsdenia vomitoria. Moon. Ceylon plants, p. 21.

A thick twisted root, of a pale colour, and bitterish, somewhat nauseous taste; found in the Indian bazaars. The Vitians prize it for its expectorant and diaphoretic properties. It is prescribed for children, to produce vomiting, who are oppressed with phlegm. Infusion used to extent of half a tea-cupful. Possesses virtues similar to ipecacuan, and hence has been found a useful medicine, in India, in dysenteric diseases, both by the native and European practitioners. Stem shrubby, twisting, villose; leaves opposite; petiotale, cordate-ovate, smooth above, but beneath covered with short white hairs.

It is remarked by Dr. Ainslie, in his Materia Indica, that the medicinal virtues of this root resemble those of the *Asclepias tuberosa,* or pleurisy-root; and it is chiefly noticed here, to lead to the investigation of our native species of Asclepias, all of which I believe to be active and medicinal.

The *Asclepias Curassavica,* which is a native of Jamaica, is called (in flower) blood-flower, from its reputed efficacy in stopping bloody flux, and other bleedings. A decoction of it is also said to be efficacious in gleets and fluor albus. Barham and Lunan commend it. The plant is cultivated in our green-houses, and its flowers resemble those of the *Asclepias decumbens.* It is not improbable that the name of the Jamaica plant has led to that of the species just mentioned, which is called flux-root. Its other name, pleurisy-root, indicates a coincidence of name with the properties of the *Asclepias vomitoria* of India, above noticed.

No. 93.—Aspidium. *Felix mas.* Male fern.

Officinal. *Felicis Radix.* Lond. *Aspidii felicis Maris Radix.* Edin. *Felix mas; Radix.* Dub. Root of the male fern.

Cabinet specimen, *Jeff. Coll. No. 117—figure of the plant,* No. 118.

Astringent tonic ; a reputed remedy for tape-worm ; always prescribed with a cathartic, to which its anthelmintic powers are doubly owing. Was Madame Noufer's remedy, purchased from her by the French government—they paid dear for the whistle. Rarely to be met with in this country—the cabinet specimens are from Switzerland.

No. 94.—Assafœtida. A fetid gum. See *Ferula Assafœtida.*

No. 95.—Astragalus Tragacantha.

Officinal. *Tragacanth.* Lond. *Astragali Tragacanthæ gummi.* Edin. Tragacanth.

Cabinet specimen, Jeff. Coll. No. 119.

A Persian shrub, yielding the Gum Tragacanth, which may be used as a local demulcent, like Acaciæ gum ; chiefly employed, from its tenacity, in pharmaceutical preparations ; it is used by apothecaries, to paste labels on their bottles, &c. The shoemakers call it gum dragon, and use it in pasting the inner to the outer soles of shoes and boots.

No. 96.—Atropine.

Cabinet specimen, *Jeff. Coll. No.* 120.

The alkaline or salifiable base of *Atropa Belladonna,* discovered by Brandes. He boiled 2℔ dried leaves of the plant, in water q. s.—pressed decoction, and reboiled in water. The two decoctions were *mixed,* and *sulphuric* acid added to precipitate albumen and similar bodies ; filtered and super-saturated the decoction with potass. The precipitate obtained, when washed in pure water and dried, weighed 89 grs. in small crystals ; solution of them in acids, and precipitation by alkalies, yielded pure atropine. In Virey's edition of Gmelin, is another process : digesting the decoction with magnesia, boiling the precipitate in alcohol, and filtering. On cooling, atropine crystallizes in needles, or translucent and shining prisms, without colour.

Qualities. White ; nearly insoluble in water—more soluble in hot than cold alcohol—insoluble in ether and oils. Forms crystallizable neutral salts with acids. Very deleterious ; its vapour occasions vertigo, head-ache, pains in back. Vapour of solutions of its nitrate phosphate or sulphate, applied to the eye, dilates the pupil ; more conspicuous and continued, if atropine be tasted. It also in this way produces vertigo, cerebral pains, shaking of the limbs, flushings, with alternations of sensation of cold and heat, dyspnœa, and reduced arterial excitement.

Medical Properties and Uses. Being the concentrated deleterious principle of Belladonna, may be used in such diseases as that herb and its extract are used for; also in dilating the pupil for surgical operations. The dose must be very minute—perhaps from the 32d to the 16th part of a grain.

No. 97.—Atropa Belladonna. Deadly nightshade.

Cl. 5. Ord. 1. *Pentandria Monogynia.* Nat. ord. *Luridæ*, Linn. *Solanaceæ*, Juss.

Cor. bell-shaped. *Stam.* distant. *Berry*, globular, 2-celled.

Officinal. *Belladonnæ Folia.* Lond. Dub. *Atropæ Belladonnæ folia.* Edin. Deadly nightshade leaves. *Atropa Belladonna, Folia.* Deadly nightshade, the leaves. U. S.

Cabinet specimen, Jeff. Coll. No. 121—figure of the plant, No. 122.

Native of Britain, Switzerland, Austria, and Italy; frequenting shady places, in calcareous soils; flowering in June, and ripening its berries in September.

Qualities. Leaves inodorous; taste slightly nauseous, sweetish, sub-acrid. They do not become deteriorated by drying. Vauquelin found a resembling substance to animal gluten in them, salts with a base of potash, and a bitter principle, on which their narcotic virtue depends. This has since, by Brandes, been ascertained to be an alkaline principle, called now *Atropium*, or *Atropine*, the sulphate of which crystallizes very beautifully, (No. 96.)

Every part of the plant is poisonous; children have been allured to eat the berries, by their beauty and sweet taste, and have been killed by them. They intoxicate, and induce gesticulations, laughter, thirst, difficult deglutition, dilatation of the pupils of the eyes, nausea, a detraction of the eyelids, restlessness, swelling of the face, stupor, delirium, low and feeble pulse, paralysis of the intestines, convulsions, and death. The root of the plant partakes of the same virulent properties as the leaves. It is supposed that this is the plant which produced such extraordinary effects on the Roman soldiers, during their retreat, under Antony, before the Parthians. They suffered great distress for want of food, and ate any vegetables they met with—among others, one that was mortal. He that had eaten of it lost his memory and his senses, and employed himself wholly in turning about all the stones he could find, and after vomiting up bile, fell down dead. This is the account given of the disaster, in Plutarch's life of Antony.

Buchanan relates, that "the Scots mixed a quantity of the juice of Belladonna (*solanum somniferum*) with the bread and drink, which by their truce they were to supply

the Danes with, which so intoxicated them, that the Scots killed the greatest part of Sweno's army." What rascals!!! I do not think it is the root of this plant, which is alluded to by Shakspeare, when he says, in Macbeth—

"Or have we eaten of the *insane* root,
That takes the reason prisoner?"

First, because the maddening property ascribed, and justly, to the berries and leaves of Belladonna, have not been proved to pertain to the root; and secondly, because there is nothing esculent or savoury in the taste of Belladonna root—while several roots of umbelliferous plants are at once sweet and deliciously aromatic, and affect the brain with intoxication.

Post mortem examinations, after death induced by Belladonna, have shown the stomach and intestines to have been inflamed. The body swells after death, and hæmorrhage ensues from the mouth, nose, and ears; and a speedy decomposition takes place.

For relieving the system from this poison, I refer you to the lectures on Toxicology. The name Belladonna originated in the circumstance of the Italian women using the juice of the berries as a cosmetic.

Medical Properties and Uses. Narcotic, sedative, diaphoretic, diuretic; externally applied, discutient and assuaging; dilates the pupil of the eye, preparatory to the operation for cataract, when applied by dropping the infusion into the eye. Theden, surgeon-general of the Prussian armies, recommends it internally, from experience, in dropsies: he used the leaves, and found them to allay the nervous irritability preceding dropsy. Drs. Buckhave, Borden, Hufeland, Schæffer, Marc, Weltzer, and Alibert, used Belladonna in whooping cough, with the effect of shortening the course of the disease, and relieving its distressing paroxysms. Has been used in epilepsy, by Münich and Greeding. Cullen cured cancer of the lip with it, and some cases of scirrhous and cancerous affection. Alibert and Mucker speak well of it, in scirrhous disease of the intestines and stomach. Others have found it prejudicial. Mr. Q. Bailey found it efficacious in *tic doloreux*. Has been used in, and recommended for, hydrophobia, by the German physicians. I should doubt its efficacy here; for it produces one of the most distressing symptoms of that malady—thirst; together with constriction of the pharynx. It has been commended by Bailey and Burdach, in melancholy, mania, and hysteria. Hufeland says, it allays convulsions from scrofulous irritation. It has been used in gout, chronic rheumatism, paralysis, and amaurosis. Dr. Reimarus, of Hamburg, discovered that if the dilated extract be dropped in the eye, the pupil becomes

dilated and fixed. Mr. Wainwright and Mr. Paget, surgeons, confirmed this fact, and availed themselves of it, preparatory to operations on the eye. The application gives no pain. The latter thinks it well adapted to make examination of the state of the lens and capsule, previous to determining on the operation.

The leaves furnish the best form of exhibition. Dr. Paris observes, "the recent leaves, powdered, and made into an ointment with an equal weight of lard, rubbed over the penis, prevents priapism, and relieves chordee more effectually than any application which has been proposed." Externally, the leaves make a good assuaging poultice. Much of the extract found in the shops is carelessly prepared, and inactive: the latter can only arise from inattention in obtaining it, because the proximate principle, Atropine, is deleterious. Generally, it will be found best to use the leaves.

The student should guard himself against mistakes, owing to the common name. I have known it confounded with *woody* nightshade, and *black* nightshade, (*solanum dulcamara*, and *solanum nigrum*.) Though all narcotic plants, *Belladonna* is infinitely more active than either of the other nightshades, and indeed, than most other narcotic vegetables.

Dose, in substance, 1 grain, gradually increased to 12 or 14 grains—of the infusion, made with ℈j of dried leaves and f℥x of boiling water, f℥ij daily, and increased with circumspection.

A little of the infusion, dropped into the eye, dilates the pupil. Adams, in his "Practical Observations on Ectropium, &c." says, its operation seems to be confined to the radiated fibres of the iris. By continued use, it loses its effect; but desisted from for a time, again produces this dilatation.

Offic. Prep. *Extract. Belladonnæ.* L. & U. S. *Succus Spissatus Atropæ Belladonnæ.* E.

Formula. ℞ Pulveris Belladonnæ foliarum, gr. i
——— Potassæ Nitratis, gr. x
——— Sacchari, gr. x
Made into a powder, to be taken every night at bed-time, for chronic rheumatism, extensive ulcerations, mania, and epilepsy.

No. 98.—Aurantii Cortex et Baccæ. The fruit and outer rind of the fruit of the orange tree. *Citrus Aurantium*, which see.

No. 99.—Aurum. Gold. Phar. U. S.

This stands, in the above work, in the first list. At one time

in Europe, (owing to Dr. Chrestein's publication in 1811,) and within fourteen years in this country, it was esteemed anti-syphilitic: cases of syphilis are reported to have been cured, in the New-York Hospital, by this remedy. Dr. I. C. Niel, a French physician, says, the aurific preparations are efficacious in scald-head, elephantiasis, and scrofula: he says, they sometimes salivate. Drs. Hosack and Francis observed secondary symptoms to occur, in the cases of *cure* of syphilis, made in the New-York Hospital, by muriate of gold. On the whole view of what has been said in favour of gold, I am not inclined to attach great importance to it as a remedy. It is well enough, in its proper place, and for its proper purposes, for which it is much more useful than as a medicine. Plenty of it would doubtless cure many diseases of mind and body!

Preparations used are—1. Metallic gold, in minute division. 2. The oxyde, precipitated by potash. 3. The oxyde, precipitated by tin. 4. The triple muriate of gold and soda. The muriates the most active. Dose, ever so little—few patients can afford to pay for much; and it is, questionless, ill suited to *poor* practice.

Gold-leaf was formerly used to cover pills, that their nauseous taste and odour might not be perceived. Pills, thus sheathed, may be rendered insoluble, and pass off by stool—now entirely disused; and the "gilded pill" is only met with in the song of the poet.

No. 100.—Avena Sativa. Common oat.

Officinal. *Avena farina.* Oat-meal. Phar. U. S. *Avenæ Semina.* Lond. Edin. The seeds of the oat called grits.

Cabinet specimen, Jeff. Coll. No. 123.

I prefer the U. S. officinal term, it being the only proper one to designate the article used as a restorative dietetic. In this country, we never use grits, which term is applied to the oat freed from its epidermis. I discard the view of this article as a medicine, and class it in section (F) of this course. As a nutritive substance, it is perhaps overrated. It is liable to produce acidity, and distressing colics, with lying-in women, when made a constant diet: wine added to it only increases its accescency; and I think, when wine can be proper for parturient women, they had much better discard oat-meal gruel, and eat animal soups. I have, however, known many who could bear it, and grew fat upon it—still, I deem it, in general, a less fit diet for such, than some of the amylaceous feculæ. Immemorial usage, however, has given it a place in the parturient chamber, and there it sticks as long as the nurse does. As I have scarcely been able to drive it out of my own house, so I despair, by these remarks, to send it from the sick cham-

bers of other houses. Yet they may serve to induce you to watch its effects closely, and when it produces heartburn, to interdict it. I have used it much with seamen and soldiers, and their iron-bound stomachs resist its accescency—delicate and dyspeptic women have no such safeguard. When used, it ought to smell gratefully—it is apt to be musty, which increases the inconvenience mentioned

No. 101.—Azedarach. Azedarach. *Cortex.* Phar. U. S. The bark of the Pride of China. *Melia Azedarach*, which see.

B.

No. 102.—Benzoinum. Benzoin. Commonly, Gum Benzoin and Benjamin. The balsamic product of *Styrax Benzoin*, which see.

No. 103.—Benzoic Acid. The flowers of Benzoin; sublimed from the balsam. See as above.

No. 104.—Bistortæ Radix. *Bistort.* The root of *Polygonum Bistorta*, which see.

No. 105.—Balsamum Peruvianum. Balsam of Peru, the product of *Myroxylon Peruiferum*, which see.

No. 106.—Balsamum Tolutanum. Balsam of Tolu, the product of *Toluifera Balsamum*, which see.

No. 107.—Baryta. Barytes.

Found only in combination with carbonic acid; carbonate of Barytes, or Witherite; and with sulphuric acid, sulphate of Barytes, or Heavy Spar.

No. 108.—Barytæ Carbonas. Carbonate of Barytes of the different Colleges.

Cabinet specimen, Jeff. Coll. No. 124.

Inodorous, insipid, poisonous—only used for preparing the muriate.

No. 109.—Barytæ Sulphas. Sulphate of Barytes of the Colleges.

Cabinet specimen, Jeff. Coll. No. 125.

Used only as a substitute for No. 108, in preparing the muriate, when the other cannot be had.

No. 110.—Barytæ Murias. Muriate of Barytes of the Colleges. Prepared from the above.

Cabinet specimen, Jeff. Coll. No. 126.

Qualities. A heavy bitter salt, of a saline, pungent taste.

Medical Properties and Uses. Occasionally, it gripes, and produces anxiety and nausea, when first taken, especially if worms infest the body. Slightly opens the bowels; does not affect the pulse—Hufeland says, it makes it slower. Diuretic sometimes, and diaphoretic oftener. Has been used by Dr. Crawford, of England, in scrofulous cases, with success. Pearson, Clark, Hamilton, Fourcroy, Goerling, I. A. Schmidt, Peterman, and Hufeland, confirm his recommendation of the remedy. Others have condemned it as injurious. When I was resident physician in the Pennsylvania Hospital, Dr. Physick directed me to give it to discuss scrofulous tumours; and in several cases, it appeared to him and to me, to produce rapid detumescence. I subsequently prescribed it at sea, in numerous cases of a similar kind, sometimes with success; but for many years I have not used it—for which I cannot give any good reason: one gets out of the way of prescribing a good remedy, to take up with some new-fangled thing, not half so good. My early impressions are strongly in favour of the efficacy of this remedy, in scrofulous tumours. I prescribed it, in the Isle of Wight, for a goitre in a girl living in the inn where I dwelt: it did not cure her, but lessened the goitre perceptibly in a short time. It has been used with benefit in obstinate cutaneous eruptions.

Dose of the solution of ℥j in f℥j of water, is from 10 to 15 drops every three hours. I have given 100 drops in twenty-four hours, for several days in succession, without inconvenience—unless slight nausea, and some purging, may be called so. The dose should be gradually increased from 10 drops upward—I see no reason why it might not much exceed the quantity I have given.

No. 111.—Bdellium. Gum resin.

Semi-pellucid; of a yellowish-brown or dark brown colour, according to its age; unctuous to the touch, but brittle; soon, however, softening between the fingers; in appearance, it is not unlike myrrh; of a bitterish taste, and

moderately strong smell; splutters a little in burning, but does not explode, as Herman Valentine reports. Used by Tamool doctors, in India, as *a purifier of the blood* in depraved habits, and externally in foul ulcers, and in discussing tumours of the joints. In Europe, is considered as diaphoretic, diuretic, cathartic, pectoral.

Dose, from ℈j to ʒj.

The tree which yields Bdellium is not certainly known—is supposed to be *Chamærops pumilis*, a dwarf fan-palm. Others say, it is obtained from a species of Amyris; others, from the *Borassus flabelliformis*. It is one of the substances thrown into the fire, by the Hindoos, at their trial by ordeal—*Ainslie;* also, Asiatic Researches.

No. 112.—Bismuthum. L. & U. S. Bismuth.

Cabinet specimen, Jeff. Coll. No. 127.

A metal used for preparing the

No. 113.—Bismuthi Sub-nitras. L. & U.S. Sub-nitrate of Bismuth: formerly called Oxyde of Bismuth, and Magistery of Bismuth.

Cabinet specimen, Jeff. Coll. No. 128.

Qualities. A pure white, inodorous, insipid powder; soluble in strong acids, from which water readily precipitates it—therefore insoluble in that fluid, and in very diluted acids; soluble in ammonia, which precipitates it from the nitrate; sparingly soluble in potass and soda. It is blackened by sulphuretted hydrogen gas, its solution in water, and all the hydro-sulphurets. Mixed with charcoal, and highly heated, is decomposed, and metallic bismuth regenerated.

Medical Properties and Uses. Antispasmodic and tonic; used in gastrodynia, dyspepsia, spasms of the stomach, hysteric colics, palpitations of the heart, epilepsy. Mr. A. T. Thompson combines it with extract of hops, and Hufeland with cajeput oil and extract of henbane.

An old remedy, revived by Odier of Geneva, and De la Roche of Paris, followed by Marcet, Bardsley, Clark, in England; Belden, Reil, Hufeland, Krysig, of Germany; and Hosack and Dr. Samuel Moore, of the United States; chiefly as a remedy for gastrodynia and cardialgia.

Dose, from 1 to 12 or 15 grains, two or three times a day. Odier gave it, a quarter of an hour before eating, in 12 grain doses. In an excessive over-dose, is a poison.

No. 114.—Bitumen.

A term comprehending various mineral inflammable sub-

substances, somewhat resembling oily and resinous bodies. The one used in medicine is the

Officinal. *Petroleum.* Lond. *Bitumen Petroleum.* Edin. *Petroleum Barbadense.* Dub. *Petroleum.* Barbadoes Tar: commonly called Naphtha.

Cabinet specimen, Jeff. Coll. No. 129.

Qualities. A pale yellowish thin fluid; light, transparent, odoriferous; unctuous to the touch, volatile, and very inflammable.

Medical Properties and Uses. Stimulating, antispasmodic, and sudorific; given in asthma, and coughs without inflammation. Chiefly used as a stimulant, in disease of hip joint, in rheumatic and other chronic pains, chilblains, porrigo, and to paralytic limbs, applied by friction. Dr. Flemming speaks favourably of it, internally administered, in the chronic rheumatism of the West Indies—he used the Burman *Petroleum.* Rarely used in U. S.

Dose, from ♏ x to f℥ss, in any convenient vehicle.

No. 115.—Boletus Ignarius. Agaric of the oak.

Officinal. *Boletus Ignarius. Agaricus.* Edin. Agaric.

Cabinet specimen, Jeff. Coll. No. 130.

A fungus, found in Europe, growing on the decayed trunks of the ash and oak—that of the latter is said to be most valuable.

Qualities. Prepared Agaric is inodorous; taste slightly astringent. Bouillon la Grange found it to contain resin, extractive, something similar to animal gelatine, and different salts.

Medical Properties and Uses. A celebrated styptic, applied to bleeding blood-vessels; introduced, in 1750, by Brosard, a French surgeon, and for some years generally used—not now used.

No. 116.—Bonplandia Trifoliata. Three-leaved Bonplandia.

Synonym—Cusparia febrifuga of Humboldt, and adopted by the London College.

Willdenow named the tree as above, in honour of Baron Humboldt.

Cl. 5. Ord. 1. *Pentandria Monogynia.* Nat. ord. *Quassiæ,* Juss.

Cal. monophylous, campanulate, 5-toothed. *Cor.* 5-petalled, cohering at the base—funnel form.

Officinal. *Cuspariæ Cortex.* Lond. *Bonplandiæ Trifoliatæ Cortex.* Edin. & U. S. *Angustura; Cortex.* Dub. Cusparia Bark, Bonplandia Bark, or Angustura Bark.

Cabinet specimen, Jeff. Coll. No. 131—figure of the tree, No. 132.

This elegant evergreen tree is a native of South America. It is found abundantly in the forests, five or six leagues from the eastern bank of the Carony, at the foot of the hills which surround the Missions of Capassui, Upata, and Alta Græcia. It grows also west of Cumana, in the Gulf of Santa Fe. The tree is 60 or 80 feet high, with a cylindrical trunk, covered with a grey coloured bark; branching towards the top; the leaves two feet long, independent of the petiole, and composed of three oblong ovate leaflets, pointed at base and apex, and attached at their bases to a single channelled petiole, from 10 to 12 inches long. *Inflorescence* a terminal raceme, composed of alternate peduncles, bearing from 3 to 6 flowers each. *Calyx* inferior, persistent, 5-toothed, and tomentose; *corolla* funnel-shaped, 5-petalled, united below, so as to appear a funnel-shaped tube. *Nectary*, 5 glandular bodies. *Stamens* shorter than the petal. *Pistil*, 5 oval hairy ovaries, from the centre of which a single style rises, supporting 5 fleshy green stigmata. *Fruit*, 5 oval bivalve capsules, each enclosing a single seed.

In 1778, some parcels of Angustura bark were imported into Europe from Dominica. At that time, the tree which yielded it was not known, but was supposed to be a native of Africa. It was subsequently imported from Havana and Cadiz; but not until Humboldt and Bonpland travelled into South America, were the real site and nature of the tree ascertained. It comes in flat pieces, of different lengths; some nearly flat, others rolled into partial quills of different sizes, packed in cases. The pieces are covered with a thin, whitish, wrinkled epidermis; the inner surface smooth, of a ferruginous-yellow hue; breaks short, with a resinous fracture; is easily pulverized. The powder, when triturated with lime or magnesia, yields the smell of ammonia.

Qualities. Odour not strong, but peculiar; taste bitter, slightly aromatic, permanent; contains cinchona, resin, extractive, carbonate of ammonia, and essential oil. The active matter is taken up by cold and hot water, and is not injured by long coction; but the addition of alcohol precipitates part of the extractive. Its bitter and aroma are soluble in alcohol. Proof-spirit is its best menstruum. The alcoholic tincture reddens litmus paper, and becomes milky when water is added. The aqueous infusion precipitates the infusion of galls and of yellow cinchona, but not gelatine.

Medical Properties and Uses. An aromatic tonic; does not oppress the stomach, but gives warmth to it; expels

tlatus, opens the bowels, and provokes the appetite. Efficacious in bilious diarrhœa and dysentery, after cleansing the primæ viæ; useful in dyspepsia, leucorrhœa, hysteria, and indeed in all atonic affections indicating the necessity of aromatic tonics. Alibert tried it in the St. Louis hospital, in intermittents, but found it not to answer. Brandes found it efficacious in these fevers. I have used the Cusparia for many years past; and in the fever which prevailhere in 1823–4, with the greatest and most unequivocal advantage: I cured numerous cases with it entirely, after a mercurial purge and an emetic. It may be exhibited in infusion, decoction, tincture, extract, or in substance—in either case, the union of cinnamon or ginger disguises its nauseous taste: it may also be combined with neutral salts, or magnesia.

Dose, of the powdered bark, grs. x to ℈j—more than this pukes, or creates nausea. Of the infusion or decoction, f℥j to f℥ij—beyond the latter, it also nauseates. Of the aqueous extract, grs. x.

Adulterated with No. 118, which is an energetic poison. This is an important fact to be recollected, because in commerce the poisonous bark is called sometimes *False Angustura*, more commonly *False Angustura*—both of which names should be discarded, and that of *Brucea bark* substituted, by which no confounding one with the other could occur.

No. 117.—Boswellia Serrata. (*Roxburg.* Asiatic Researches, 8vo. vol. ix. p. 377.)

Cl. 10. Ord. 1. *Decandria Monogynia*, Linn.

Gen. char. *Cal.* beneath, 5-toothed. *Cor.* 5-petalled. *Nect.* a crenulate fleshy cup, surrounding the lower part of the germ, with stamens inserted on its outside. *Capsule* 3 sided, 3-valved, 3-celled. *Seeds* solitary, membranous, winged.

Officinal. *Olibanum.* Lond. *Juniperi Lyciæ gummi resinæ.* Edin. *Olibanum; gummi resina.* Dub. Olibanum. In India, called *Sálaĭ.*

Cabinet specimen, Jeff. Coll. No. 133.

A large tree, native of the mountains of India; yields the Olibanum or Frankincense of commerce, which is imported from the Levant; but this is not so much esteemed as the Olibanum from Arabia.

Qualities. A translucent whitish-yellow brittle substance, generally covered with a whitish powder, from the attrition of the pieces with each other; when burnt, gives out a very fragrant and delicious odour; taste acrid, bitterish, slightly aromatic; affords a volatile oil.

Medical Properties and Uses. Stimulant, diaphoretic. Formerly, much used in affections of the chest—now, only to give a fragrant smell to sick rooms, by burning it in them; and as incense, in Greek and Roman chapels. I am of opinion, that we have discarded this article without good reason: its delicious fragrance, and its balsamic properties, have induced me to prescribe it as an inhalation, in incipient phthisis and angina; and its good effects have been so manifest, that I recommend it as an expectorant, in this form of exhibition, particularly well suited to the strictures of the chest and dyspnœa attending inflamed tubercles, in scrofulo-phthisical subjects. For this reason, I have particularly noticed it.

No. 118.—Brucea Antidysenterica. (Bruce.)

Cabinet specimen, Jeff. Coll. No. 134.

Synonyms—*Brucea Ferruginea.* (L'Heretier.)
Wooginos, in Abyssinia, where it is indigenous.
Angustura pseudo-ferruginea. (Orfila's Toxicol.)
Angustura virosa. (Rambach.)
Dioicia Tetrandria. Nat. fam. (Juss.) *Quassiæ.*
False Angustura—Fine Angustura.

A middling-sized shrub, branches few, alternate, patulous, round and thick; leaves alternate, spreading, unequally pinnate; flowers crowded together, colour herbaceous, tinged with red or russet; root valuable in dysentery; is a simple bitter, without aroma or resinous taste, leaving in the throat a roughness resembling that from ipecacuanha. This species yields *Brucia*, which see.

The bark of this tree is met with in commerce, and has been called by druggists *fine Angustura* and *false Angustura.* It comes in pieces rolled up, of a yellowish-grey colour inside—some of them have the epidermis affected with scattered whitish excrescences; others covered with a brown pulverulent substance, resembling the rust of iron; other pieces are more or less polished, sometimes rugose, and maculated with coloured spots—these are generally thicker than the other pieces. The powder is of a grey colour, looking and smelling like ipecacuanha; it is intensely bitter, and nauseates most persons. Orfila, who calls it *Angustura pseudo-ferruginea*, has shown that it acts like *nux vomica*, St. Ignatius bean, and *Upas antiar.* It appears, from the account of Professor Emmert, of experiments he made at Bonne, on a species of Angustura, to which Rambach first gave, in 1804, the name of *Angustura virosa*, to be identical with the one under notice. He also found it a violent poison. A child died, after taking the decoction in mistake.

The ferruginous rust which covers this bark, and which resembles the rust of iron, possesses certain chemical properties of that metal; for if water, acidulated with muriatic acid, be agitated in contact with it, it assumes a beautiful green colour, and affords, with an alkaline prussiate, (hydrocyanate of potass,) a prussian blue precipitate.

Late experiments have proved the existence in this bark of an alkaline proximate element, which has been called *Brucia*. According to the analysis of Pelletier and Caventou, the bark contains—1, a fatty substance; 2, yellow colouring matter; 3, gallate of Brucine; 4, traces of sugar; 5, gum; 6, woody fibre.

Has not been used in medicine—is a good subject for an inaugural thesis.

Brucea Antidysenterica, of Bruce's Travels into Abyssinia, (vol. v. p. 69.) is described by L'Heretier, under the name *Brucea ferruginea*. It is called *Woogínos*, and is supposed by some to be the Angustura bark, No. 116, which it is not—and a more serious mistake could not be. Dr. Roxburg observes, that another species, the *Brucea Sumatrana*, is fetid, and simply but intensely bitter, and promises to be as good an antidysenteric medicine as the preceding. It is called, in India, *Amypadoo*.

A third species of Brucea was discovered by Dr. Horsefield, in Java, called *Fraunalot* by the Javanese: he says, it is of a bitter nature, and possesses properties somewhat similar to those of the *Quassia simarouba*. Another species is spoken of by the same author, under the Javanese name *Patti-Lallar*—native of Java—possessing the same qualities as the other species.

No. 119.—Brumadundoo. See No. 78.

No. 120.—Brucia. (Brucine.)

In 1819, Pelletier discovered, in the bark of *Brucea antidysenterica*, an organic, salifiable base, which is intensely bitter, and slightly soluble in water; it unites with acids, forming neutral salts. Its action on the animal system is similar to *Strychnine*, but weaker; is a narcotic.

Dose, from 1 to 3 grains—given in pills, tincture, and mixture.

Vux vomica also contains Brucine; but for medical purposes, that obtained from No. 118 should be used, because that from the *vomic nut* is apt to remain mixed with some strychnine, which increases its activity, and prevents calculation on its effects.

The medical properties and uses of Brucine would form a good subject for an inaugural dissertation: much credit would be derived from a good experimental dissertation on this subject.

No. 121.—Bubon Galbanum. Long-leaved Bubon.

Cl. 5. Ord. 2. *Pentandria Digynia.* Nat. ord. *Umbellatæ.*

Officinal. *Galbani gummi resina.* Lond. Dub. *Bubonis Galbani gummi resina.* Edin. Galbanum—Gum-resin.

Cabinet specimen, Jeff. Coll. No. 135—figure of the plant. No. 136.

An umbelliferous plant, 10 feet high, native of the Cape of Good Hope and other parts of Africa, and of Syria. When the stem of the growing plant is cut or wounded, a cream-coloured juice flows out, which is the gum-resin: a small quantity exudes spontaneously from the joints of the stem It comes in variegated masses, of a yellowish-brown hue.

Qualities. Strong peculiar odour, rather fetid, faintly resembling turpentine; a bitterish, warm, acrid taste. The latest analysis of this gum-resin, by M. Meisner, afforded—Resin 65.8, gum 22.6, cerasin 1.8, malic acid 0.2, volatile oil 3.4, vegetable debris 2.8, loss 3.4; soluble in water, wine, and vinegar, by trituration to extent of ½ of its weight. They form milky mixtures, which are deposited by rest. To suspend the drug permanently, the yolk of an egg, or Acacia gum mucilage, is requisite—either must be half the weight of the galbanum. Alcohol takes up one-fifth of its weight, producing a golden yellow tincture, which has the sensible properties of galbanum, and becomes milky by adding water. A mixture of 2 pints rectified spirit and one of water, dissolves all but the impurities. Galbanum yields half its weight of volatile oil, which is at first blue, by distillation.

Medical Properties and Uses. Antispasmodic, and acts like assafœtida, but more powerfully. Dr. Paris remarks truly, it might be "placed between assafœtida and ammonia." Externally, it is resolvent, and induces suppuration in sluggish tumours.

To be given in pill. Dose, from grs. x to ʒj.

Offic. Prep. *Pil. Galbani comp.* L. *Pil. Assafœtid. comp.* E. *Pil. Myrrh comp.* D. *Tinct. Galbani.* D. *Emplast Galb.* D. *Emplast. Galb. comp.* L. *Emplast Assafœtid.* E. *Emplast. Cumming.* E.

C.

No. 122.—Cajuputi Oleum. Cajeput oil. The product of *Melaleuca Cajuputi*, which see.

No. 123.—Calami Radix. The root of Calamus, or sweet flag. See No. 28.

No. 124.—Calamina. Calamine. An impure carbonate of zinc: used in making Turner's cerate. See *Zincum*.

No. 125.—Calumbæ Radix. Calumba root: the root of *Menispermum palmatum*, which see.

No. 126.—Calx. Common lime.

Rarely found in an uncombined state, but abundantly in union with other substances. The medicinal preparations are from

No. 127.—Carbonas Calcis a—*Mollior, creta alba.* Dub. Edin. *Creta.* Lond. Chalk.

A mineral found in the north of Poland, France, some of the Danish islands, and the south of England.

Qualities. Inodorous, insipid; adheres to the tongue somewhat; white, or yellowish white, or greyish white.

Medical Properties and Uses. Antacid; must undergo levigation and ablution, before used as a medicine. Externally, an absorbent in burns and excoriations.

Offic. Prep. *Creta preparata. Mixtura carbonis calcis,* U. S.

Formulæ—

No. 1. ℞

Carb. calcis præp.	℥iss
Sacchari,	ʒj
Pulv. Acaciæ gummi,	ʒss
Ol. cinnamomi,	♏x
Tr. Opii,	fʒij
Aquæ,	fʒxx

A mixture for diarrhœa depending on acidity. Dose, a table-spoonful *pro re nata.*

No. 2. ℞

Pulveris Catechu extracti,	grs. xv
Pulv. Cretæ comp. cum opio,	℈j

A powder, to be taken after every dejection, in diarrhœa from debility of bowels, or from acidity.

No. 128.—Calcis Liquor. L. Lime-water. *Aqua Calcis.* E. D. *Liquor Calcis.* U. S.

This is a saturated solution of lime in water, fʒj of which contains ¼ of a grain of lime. Mr. Dalton has discovered that lime is more soluble in cold than hot water: he concludes that the quantity held in solution by water at 32° F., is nearly double that retained by water at 212° F. This statement is confirmed by Mr. Phillips.

For incompatible substances, see table at end of Vol. I.

Medical Properties and Uses. Antacid; used in dyspepsia attended with acidity; usually mixed with an equal quantity of milk, in which state it is useful in loosenes of the bowels of infants. Is astringent in leucorrhœa, and the later stage of dysentery and protracted diarrhœa. Is antilithic. Is tolerated and retained by an irritable stomach. Forms the basis of astringent gargles. Milk disguises its caustic acerbity and its flavour, without diminishing its virtues. Used as an injection, for ascarides.

Dose, f℥j to f℥vj.

Formula— ℞ Liquoris Potassæ, f℥ij }
Liquoris Calcis, f℥vj }

A table-spoonful, or two, to be taken shortly before meals, by persons afflicted with acidity of the stomach.

No. 129.—Camphora. Camphor. See *Dryobalanops Camphora.*

No. 130.—Cambogia. Gamboge——Camboge; the product of *Staligmitis gambogioides*, which see.

No. 131.—Canella Alba. White or laurel-leaved Canella.

Cl. 11. Ord. 1. *Dodecandria Monogynia.* Nat. ord. *Oleraceæ*, Linn. *Meliaceæ*, Juss.

Cal. 3-lobed. *Pet.* 5. *Anthers* 16, adhering to a pitcher-shaped nectary. *Berry* 1-celled, with 2 or 4 seeds.

Officinal. *Canellæ Cortex.* Lond. *Canellæ Albæ, Cortex* Edin. *Canella Alba.* Dub. & U. S. Canella bark.

Cabinet specimen, Jeff. Coll. No. 137—figure of the tree, No. 138.

A native of the West Indies. The inner bark of the branches is freed from the cuticle, and dried in the shade. The quilled pieces are of a straw-yellow colour on both sides, but paler within; break with a starchy fracture. The flat pieces, which appear to be the bark of the largest branches or of the stem, are yellow on the outside, and Sienna brown within.

Qualities. Odour, when fresh broken, aromatic, like a mixture of cloves and cinnamon; taste slightly bitter, very warm and pungent. The watery infusion is chiefly bitter, slightly aromatic or pungent. Alcohol extracts all the virtues. The tincture is bright yellow, and becomes milky

by adding water. By distillation, Canella yields a thick, heavy, yellow, very pungent, gratefully odorous, essential oil; on this, and a little resinous matter, its virtues depend

For incompatible substances, see table at end of Vol. I.

MEDICAL PROPERTIES AND USES. An aromatic tonic; usefully combined with bitters, in dyspepsia, gout, and other diseases attended with general debility; it corrects the griping of aloes, and other resinous cathartics; is said to prove useful in scurvy.

Dose, of the powdered bark, grs. x to ʒss—of the tincture, ℥ss to ℥j.

OFFIC. PREP. *Tinctura Gentianæ composita.* E. *Vinum Aloes.* Lond. Dub. *Pulv. Aloes cum Canella.* Dub.

No. 132.—CANTHARADIN. The blistering proximate principle of No. 133.

No. 133.—CANTHARIS VESICATORIA. Blistering or Spanish flies. Cantharides.

OFFICINAL. *Cantharis.* Lond. *Cantharis Vesicatoria.* Edin. *Cantharis.* Dub.

Cabinet specimen, Jeff. Coll. No. 139.

QUALITIES. The blistering principle has been obtained in a separate state, in the form of small crystalline plates, of a micaceous lustre—called *Cantharadin* by Mr. A. T. Thompson. When pure, is insoluble in water—rendered soluble by the presence of a yellow matter, existing in a native state of combination with it; very soluble in oils. Robiquet says, flies recently collected yield some uric acid.

MEDICAL PROPERTIES AND USES. Cantharides are powerfully diuretic and stimulant—occasion strangury; have been used in dropsy, gleet, leucorrhœa, incontinence of urine, arising from paralysis of the sphincter vesicæ; amenorrhœa, particularly recommended by Dr. Joseph Klapp. Internally, recommended by Dr. Ansel W. Ives, in typhus. The free use of diluents necessary during their exhibition

Dose, grs. i to grs. iii of the powdered flies made into a pill, with extract of henbane, or with opium. The tincture is preferable—dose, ♏ x to ♏ xx. The external use well known.

OFFIC. PREP. *Tinctura Cantharidis.* L. *Emplastrum Cantharidis.* L. *Emplastrum Cantharidis vesicatoriæ.* E. *Ceratum Lyttæ.* L. *Unguentum infusi Cantharidis vesicatoriæ.* E. *Unguentum Cantharidis.* D. *Unguentum pulveri Cantharidis vesicatoriæ.* E. Also, the decoction of Cantharides in turpentine, found in the shops of this city.

Formula—

℞ Cantharid. in pulverulem trit. gr. i
Ammoniæ sub-carb.
Confect. aromat. āā gr. v
Syrup q. s.

Make a bolus, to be taken every four or six hours, with a draught of the compound infusion of horseradish—as an aromatic stimulant.

No. 134.—Cantharis Vittata. Potato-fly. American Cantharides.

Synonym—Lyttæ vittatæ. (Olivier.)

Resemble No. 133; yield Cantharidin, according to analysis of Dr. I. F. Dana. Properties, as the preceding, and used as they are.

No. 135.—Capsicum Annuum. Cayenne pepper.

Cl. 5. Ord. 1. *Pentandria Monogynia.* Nat. ord. *Luridæ*, Linn. *Solaneæ*, Juss.

Officinal. *Capsici Baccæ.* Lond. *Capsici annui fructus.* Edin. *Capsicum annuum, fructus.* U. S. The fruit of Cayenne pepper.

Cabinet specimen, Jeff. Coll. No. 140.

Native of India, East and West.

Qualities. The long, pointed, pendulous orange-red pods, have an aromatic and pungent odour, and an acrimonious fiery taste; partially soluble in water, but entirely in ether and alcohol; contain cinchonia, resin, mucilage, and an acrid principle, said to be alkaline.

Medical Properties and Uses. Aromatic tonic; used in fevers, and as a gargle in cynanche maligna, and relaxed condition of the throat; with purgatives, used in dyspepsia, gout, tympanitis and paralysis, dropsies, and cachectic and lethargic complaints. Externally, as a cataplasm, is rubifacient; thus used in West Indies, for coma and delirium in fevers of the tropics. The juice of the fruit is said to be a remedy for ophthalmia depending on relaxation. May be given in pills, in dose of vj to grs. x or grs. xv—of the tincture, f℥j to f℥ij, in any convenient vehicle. An infusion of gr. i to f℥j, boiling water: or f℥vi of the tincture to f℥viij of *infusum rosæ*—constitute the proportions for a gargle.

Formula—

℞ Aloes spicat. ℈j
Scammoniæ, grs. xij
Extract. Rhei, ℈ij
Bacc. Capsici pulv. grs. vj
Olei caryophyll. ♏v

Made into 16 pills, one or two at bed-time, *prō re nata*, as an aromatic cathartic.

No. 136.—Capsicum Baccatum. Bird pepper.

Cabinet specimen, Jeff. Coll. No. 141.

The berries of this and other species, mixed with the above, form Cayenne pepper, used as a condiment.

No. 137.—Carbo Ligni. Lond. Edin. Dub. Charcoal.

Powdered charcoal is antiseptic, newly prepared. It has been used internally, to correct fetid eructations of dyspepsia. Dr. Caliagno, of Italy, proposed to employ it instead of cinchona, in intermittents. I have given it a fair trial—it is inefficient. Is used in the fermenting poultice of meal and yeast. Is an excellent dentifrice.

No. 138.—Cardamine Pratensis. Cuckoo flower. *Cardaminis flores*. Lond. Edin. *Cardamine; flos*. Dub. The flowers and leaves of Cuckoo flower.

Cabinet specimen, Jeff. Coll. No. 142—figure of the plant, No. 143.

Diuretic, antispasmodic. Not used in this country.

No. 139.—Cardamomi Semina. Cardamom seeds; the fruit of *Mattonia Cardamomum*, which see.

No. 140.—Carthamus Tinctorius. *Flores*. U. S. The flowers of Dyer's Saffron.

Cabinet specimen, Jeff. Coll. No. 144—figure of the plant, No. 145.

No. 141.—Caricæ Fructus. The preserved fruit of the fig-tree. For its use, see *Senna*.

No. 142.—Caryophylli. Cloves. The unexpanded flower-buds of *Eugenia caryophyllata*, which see.

No. 143.—Carum Carvi. Common Carraway.

The aromatic seeds called *Carraway-seeds*, being the fruit of an umbelliferous plant.

Dose, in substance, from grs. x to ʒij.

Cabinet specimen, Jeff. Coll. No. 146—figure of the plant, No. 147.

Offic. Prep. *Oleum Carui.* L. D. *Aqua Carui.* L. *Spiritus Carui.* L. E. D. Left out of the Phar. U. S. Used in confectionary.

No. 144.—Cascarillæ Cortex. The bark of *Croton Cascarilla*, which see.

No. 145.—Cassiæ Pulpa. L. E. D. *Cassia fistula—Lomentorum pulpa.* **See No. 147.**

No. 146.—Cassia.

Cl. 10. Ord. 1. *Decandria Monogynia.* Nat. ord. *Lomentaceæ*, Linn. *Leguminosæ*, Juss.

Four species—

1. *Cassia senna.*
2. *Cassia lanceolata.*
3. *Cassia fistula.*
4. *Cassia marilandica.*

For species 1 and 2, which, together with *Cynanchum Oleæfolium*, constitute senna of the shops, see *Senna*, and W. P. C. Barton's Veg. Mat. Med. U. S, for a detailed account.

No. 147.—Cassia Fistula. Purging Cassia. The pulp of the *loments*, as above noticed—**No. 145.**

Cabinet specimen, Jeff. Coll. No. 148—figure of the plant, No. 149.

Native of the East and West Indies. The pulp is gently laxative—dose, ℥iij to ℥j, or more. The loments are now sold by confectioners in this city, and are eagerly bought up for a few cents, as a domestic laxative for children and weak women. The odour is mawkish; taste sweet and mucilaginous. In a dose sufficiently large for strong persons, induces flatus, nausea, and griping.

Offic. Prep. *Pulpa Cassiæ fistularis expressa.* Edin. *Confectio Cassiæ.* L. E. D. *Confectio Sennæ.* L. E. D.

No. 148.—Cassia Marilandica. American Senna; the leaves and loments.

Cabinet specimen, Jeff. Coll. No. 150—figure of the plant, No. 151.

Indigenous; a laxative, like Senna. For detailed account, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. I.

No. 149.—Castanea Pumila. *Cortex.* U. S. The bark of the *Chinquapin.*

Cabinet specimen, Jeff. Coll. No. 152—figure of the shrub, No. 153.

No. 150.—Castoreum. Castor, a substance secreted by *Castor Fiber*, the beaver, in bags near the rectum.

Two kinds in the shops—*Canadian Castor* and *Russian Castor*.

Cabinet specimens, Jeff. Coll. Nos. 154 and 155.

Qualities. Strong, heavy, aromatic odour; taste bitter, sub-acrid, nauseous; colour reddish-brown.

Medical Properties and Uses. Antispasmodic—given in such cases as admit antispasmodics. May be given in powder or tincture.

Dose, of powder, grs. x to ℈j, given as a bolus—in clysters, ʒj. Is very expensive, and rarely ordered.

Counterfeited by stuffing a mixture of dried blood and ammoniacum, and a little real Castor, into the scrotum of a goat. Russian Castor is the best.

No. 151.—Catechu. The product of *Acacia Catechu*, which see.

No. 152.—Caustic, Lunar. The nitrate of silver; an escharotic and antispasmodic tonic. See *Argentum*.

CAUSTIC, Common—caustic potash. See *Potass*. More powerfully escharotic than Lunar Caustic.

No. 153.—Celandine. See *Chelidonium majus*.

No. 154.—Centaurii Cacumina. L. E. D. The flowering tops of the common Centaury. See *Chironia Centaurium*.

No. 155.—Centaury, American. See *Sabbatia angularis*, and other species under that No.

No. 156.—Centauria Benedicta. Blessed thistle.

Officinal. *Centaureæ benedictæ herba*. Edin. *Carduus benedictus, folia*. Dub. The herbaceous part, or the leaves, of Blessed Thistle.

Cabinet specimen, Jeff. Coll. No. 156—figure of the plant, No. 157.

Emetic, diaphoretic, or tonic, according to the form and strength of the preparation used. Not now used, but in domestic practice, where its *blessed* name secures its footing—not equal to our Boneset, and very like it in its various effects.

No. 157.—Cephaelis, vel Callicocca Ipecacuanha.

One of the plants yielding ipecacuanha. These are so numerous, that, for unity, I shall briefly notice each plant under its proper letter, and refer to *Ipecacuanha* for an account of all.

No. 158.—Cera. L. E. D. & U. S. Wax.

Admitted into the Materia Medica, under two forms:—

1. *Cera flava*—yellow wax—unbleached wax.
2. *Cera alba*—white, bleached, or virgin wax.

Qualities well known.

Cabinet specimens, Jeff. Coll. Nos. 158 and 159.

A green wax is produced by the *Myrica Cerifera*, or wax-bearing myrtle, which see—Cab. spec. No. 160.

No. 159.—Cerasin: formerly confounded with gum.

The product of *Astragalus Tragacantha*. With nitric acid, yields saclactic, malic, and oxalic acids.

Officinal. *Tragacanth.*

Variety α. Cherry Gum, from the cherry tree, and others of the *Pruni*. Only partially soluble in water. Treated with nitric acid, yields malic and oxalic acids.

Cabinet specimen, Jeff. Coll. No. 161.

Var. β. Congo Gum. Cabinet specimen, Jeff. Coll. No. 162.

Var. γ. Dominica Gum. In large masses like stalactites, brittle, light yellowish brown, translucent; contains three parts cerasin, one part gum.

Cabinet specimen, Jeff. Coll. No. 163.

No. 160.—Cerata. Cerates of the different Colleges.

Pharmaceutical compositions, characterized by a degree of consistence intermediate between that of plasters and that of ointments.

1. *Ceratum calamina*—is *Turner's Cerate*, being medicated by the *lapis calaminaris*, or impure carbonate of zinc.
2. *Ceratum cetacei*—is medicated by spermaceti.
3. *Ceratum cantharidis*, called also *Ceratum lytta*—medicated by Spanish or potato flies.
4. *Ceratum plumbi super-acetas*, called also *Unguentum Cerussa*—medicated by the cooling substance designated in the name.
5. *Ceratum plumbi compositum*, called also *Goulard's Cerate*—medicated with litharge.

6. *Ceratum resinæ*, called also *Basilicon ointment*—medicated with common white rosin.
7. *Ceratum sabinæ*—*savin Cerate*—medicated with the leaves of savin.
8. *Ceratum saponis*—*soap cerate*—medicated as its name implies.
9. *Ceratum simplex*—common simple cerate——medicated with rose-water.

No. 161.—Cetaceum. Spermaceti. A concrete, *sui generis*, from the *Physeter Macrocephalus*.

Cabinet specimen, Jeff. Coll. No. 164.

Qualities. Insoluble in water and cold alcohol—soluble in hot alcohol, ether, oil of turpentine—but concretes again, as the fluid cools.

Medical Properties and Uses. Emollient, like the bland oils; reputed demulcent. May be suspended in water by yolk of egg.

Offic. Prep. In cerates as above, and some ointments.

No. 162.—Chenopodium Anthelminticum. Worm-seed. The plant and the essential oil of the seeds. U. S.

See W. P. C. Barton's Veg. Mat. Med. U. S. Vol. II.

Anthelmintic; the oil is in high repute as a remedy for expelling worms—dose, 5 drops on loaf-sugar, followed by calomel, after three successive days.

The *Chenopodium Ambrosioides* is mistaken for it—see W. P. C. Barton's Compendium Floræ Philadelphicæ, under the generic name *Chenopodium*.

No. 163.—Chironia Angularis. One of the names for the American Centaury. See *Sabbatia Angularis*.

No. 164.—Cicuta. *Extractum Cicutæ. Extractum Conii*, from *Conium Maculatum*, which see.

No. 165.—Cicuta Maculata—

An umbelliferous indigenous plant, of medicinal virtues—see Bigelow's Medical Botany. Guard against confounding the extract of Cicuta above, with this—from which it is entirely different.

Cabinet specimen, Jeff. Coll. No. 165.

No. 166.—Cimicifuga racemosa. *Cimicifuga serpentaria.* U. S.

Synonym—Actæa Racemosa.

Black snake-root, rich-weed, &c.

Cabinet specimen, Jeff. Coll. No. 166—figure of the plant, No. 167.

See Garden, in Med. Record. Vol. VI. p. 660. Ives' edition of Paris's Pharm. Vol. II. p. 221. Barton's Collections, &c. W. P. C. Barton's Compendium Floræ Philad. and Dr. Mears' Inaug. Diss. for a degree in Jeff. Coll. 1826.

No. 167.—Cinchona. Peruvian bark. Jesuit's bark.

PERUVIAN BARK TREES—

1. *Cinchona Condaminea.* Humboldt & Bonpl.—not officinalis of Linn. Called, in South America, *Cascarilla fina—Cascarilla de Loxa—Cascara.* Known in commerce under the names, *Quinquina de Loxa—Brown Cinchona*—and *Grey Cinchona.*

Cabinet specimen, Jeff. Coll. No. 168.

Bark thin, fine, very much rolled up; the outside brownish, and cracked transversely; the inside of a rusty fawn colour: smells aromatic; breaks clean between the teeth; is very tonic and resinous, but of a middling bitterness. It is now rare, and used to be gathered only for the King of Spain; and, generally, other species are substituted for it. The independence of South America has again sent it into commerce, within a year or two.

2. *Cinchona grandiflora.*
   ——— *macrocarpa.*
   ——— *oxalifolia* of Mutis.
   ——— *officinalis* of Linn.

Female Loxa—Lima Bark.

Cabinet specimen, Jeff. Coll. No. 169.

Bark much rolled, grey, more or less whitish on the outside, and of a pale fawn colour on the inside; the outward epidermis is cracked transversely, breaks rather clean, is resinous, less astringent than the *Cinchona Condaminea*, but rather more bitter. It is mixed with other barks, especially with that of the *myrospermum pedicellatum*, the bark of which is resinous, aromatic, and speckled on the outside.

3. *Cinchona ovalifolia*, of Bonpland—called, in South America, *Cascarilla Peleuda.*

Cabinet specimen, Jeff. Coll. No. 170.

Bark similar to the preceding, cracked lengthways, clear

yellow on the inside; bitter, astringent, and resinous; mixed, by the merchants, with Havana bark.

4. *Cinchona officinalis*, of Vahl.
——— *lancifolia*, of Mutis.
——— *nitida*, of Ruiz.
——— *coriacea*.
——— *tunita*, of Lopez.
——— *angustifolia*, of Ruiz.

Penn'a. Med. Coll.
Reading Room.

Cabinet specimen, Jeff. Coll. No. 171.

Called *Pale Bark*. Bark somewhat large; fawn colour on the inside; covered with a brown rugged epidermis; split transversely; rather spicy odour; very bitter and tonic, but less resinous than No. 3. The colour becomes darker in water and spirit; has a great analogy with the true *calisaya kinkina*. Sometimes, the epidermis is taken off. There is a great affinity between this species and the *cinchona scrobiculata* of Humboldt. It is the *Quina Naranjada*, and *Cascarilla fina de Critusinga*, of the Spaniards. It is known in commerce by the name of *Calisaya*, and is preferred in South America to all other Cinchonas. Two other varieties, probably distinct species, are known in commerce by the names of *lagatijada* (lizard-like,) and *negrilla* (blackish,) from the colour of their epidermis. It is this species, vaguely known in Europe and this country by the name of *Officinal Peruvian Bark*, which, by being more common many years ago than now, gained, by its superior virtues, the celebrity of Peruvian Bark. 110 quintals only are of late years cut, while in 1779, the period at which the reputation of Peruvian Bark was the highest, 4000 quintals were cut; and within the last 15 or 20 years, the few quintals that have been cut have been reserved for the use of the Spanish government.

The name *Calisaya* is from a province in the southern part of Peru, in the Intendencia de la Paz, where this species grows. But the Peruvians also use the term generically, to designate any species of superior Cinchona.

There are three varieties of *Calisaya*, known in South American commerce—viz. 1. *Calisaya arrollenda*, rolled Calisaya; 2. *Calisaya de plancha*, flat Calisaya; 3. *Calisaya de Santa Fé*, a thick bark, (Dr. Devoti.)

5. *Cinchona glandulifera?β* Called *Huanuco*. Havana Bark.

Cabinet specimen, Jeff. Coll. No. 172.

Bark in larger pieces than No. 4; fawn-brown on the outside, which is warty, and covered with knobs or protuberances; the inside is fawn colour; breaks fibrous, slightly resinous; not so aromatic or astringent as the grey bark, but more bitter. The cracks in the epidermis are perpendicular. It is frequently mixed with the Grey Bark.

6. *Cinchona glandulifera*, of which the first named (No. 5.) is a variety. Called *Blackish Huanuco.*

Cabinet specimen, Jeff. Coll. No. 173.

Bark blackish, but in other respects similar to Huanuco.

7. *Cinchona cordifolia*, (Mutis.)
——— *pubescens*, (Vahl.)
——— *oraia Fl. Peruv.*
——— *hirsuta Fl. Peruv.* (Lambert says, 4to. 1821 p. 4. different from *hirsuta.*)

Called *Royal Yellow Bark.* Yellow Bark.

Cabinet specimen, Jeff. Coll. No. 174.

In large pieces, very little rolled; fine-grained, but very little fibrous; sometimes peeled, but with very thick epidermis, which may be separated in flakes; the inside is deep yellow; taste very bitter and astringent; the decoction is red, like that of peach-blossoms.

8. *Cinchona magnifolia*, of Bonpland.
——— *oblongifolia*, of Mutis.

Thick Red Bark. Called by the Spaniards, *Cascarilla Bora—Quinquina rouge—Quina Roxa.* By the natives, the tree is called *Palo de requeson*, and *Cascarilla de flor de Ihazar*, from the flowers smelling like oranges. In commerce, generally called *Quina Roxa*, and *Quina Coloranda.*

Cabinet specimen, Jeff. Coll. No. 175.

The bark is thick, fibrous, of a brown-red or fawn colour, bitter, very astringent; the outer coat is rugged, cracked in different directions; it breaks more like fibres than threads. This is supposed to be the Bark originally brought to England—it has since given way to the Grey Bark, but is still considered an active medicine, especially in gangrenous cases. The flowers have the odour of orange-flowers

9. *Cinchona micrantha?* New Carthaginian Bark.

Cabinet specimen, Jeff. Coll. No. 176.

Bark yellow, flat like pasteboard, thready, friable, with a silvery white epidermis, not cracked. The decoction is pale, and affords little or no precipitate with infusion of galls; slightly bitter and astringent; its febrifuge power is feeble.

10. *Cinchona lanceolata*, called *Lampigna.* Bastard *Royal Yellow Bark.*

Cabinet specimen, Jeff. Coll. No. 177.

Bark very thick, woody; in large pieces, not rolled; very little taste, and no resin.

11. *Cinchona hirsuta—Delgadilla.*

Cabinet specimen, Jeff. Coll. No. 178.

An excellent medicine, but very rare—called *Kinkina loxa delgada.*

12. *Cinchona purpurea.* Mulberry-leaved Bark.

Cabinet specimen, Jeff. Coll. No. 179.

A yellowish-brown bark, of good virtues and esteem.

13. *Cinchona lactifera—Locchi.*

Cabinet specimen, Jeff. Coll. No. 180.

A thick red bark, spongy, slightly rolled. The recent bark, scraped on the inside, yields a red-lake.

14. *Cinchona mirantha.*

Cabinet specimen, Jeff. Coll. No. 181.

Bark thin.

15. *Cinchona rosea.* Called *Asmonich.*

Cabinet specimen, Jeff. Coll. No. 182.

Bark chocolate colour on the inside, and styptic.

16. *Cinchona dichotoma?*

——— *roseu?*

Called *Barquillado.*

Cabinet specimen, Jeff. Coll. No. 183.

Bark brown, with white spots; extremely bitter. Leaves eaten by ants. Perhaps this is the Bark of Portlandia.

17. *Cinchona nitida.*

Cabinet specimen, Jeff. Coll. No. 184.

Bark used for the common Peruvian—is sold much dearer in South America.

18. *Cinchona angustifolia?*

Cabinet specimen, Jeff. Coll. No. 185.

Pale red bark. Much like No. 17, but its outer coat is white, and much less rugged; and it is neither so bitter nor astringent.

19. *Cinchona floribunda*, of Vahl.

——— *montana.*

Exostema floribunda. Called *Kinkina Piton*, or *Quinquina Piton.* Has been called, in commerce, *St. Domingo Bark?*

Cabinet specimen, Jeff. Coll. No. 186.

Bark thick, brown, rugged; of a rusty fawn colour on the inside; excites vomiting and purging: is best used externally.

20. *Cinchona Caribbæa.* Called *Caribbæa—Caribbee Bark—St. Lucia Bark.*

Cabinet specimen, Jeff. Coll. No. 187.

The bark differs but little from the *Kinkina Piton*, (No. 19,) and is much **cheaper than the other sorts.**

21. *Cinchona longiflora.* Guiana Bark.

Cabinet specimen, Jeff. Coll. No. 188.

In thick, long, woody pieces. The three species, Nos. 19, 20, 21, are bitter, astringent and scentless.

JAMAICA BARKS—

22. *Cinchona brachycarpa.*

Cabinet specimen, Jeff. Coll. No. 189.

23. *Cinchona triflora.*

Cabinet specimen, Jeff. Coll. No. 190.

The above two species are often mixed with the other Barks, and by some preferred: must be given in smaller doses, as they are considerably emetic, like No. 20.

24. *Cinchona rosea?* Called *Kinkina nova.*

Cabinet specimen, Jeff. Coll. No. 191.

Bark in thick, woody, long, straight pieces, flattened—with a smooth whitish coat, under which the vessels are filled with an acrid resin, of a reddish hue; the inside of the bark is pale red, or flesh-coloured; taste at first mawkish, afterwards acrid and nauseous. It yields both to water and spirit, a high-coloured astringent tincture, without any bitterness. May be used externally, but seems to have **but little febrifuge virtue.**

Most of the varieties and species of Peruvian Barks, and West India Cinchonas, when they get into commerce from the merchants' hands, are sold by the druggists under three or four names only—viz.

1. Peruvian Bark, Grey Bark, Pale Bark. *Cortex Peruvianus—Cortex Cinchonæ lancifoliæ—Cinchonæ officinalis cortex communis.*
2. Yellow Bark. *Cortex Cinchonæ cordifoliæ—Cinchonæ officinalis cortex flavus.*
3. Red Bark. *Cortex Cinchonæ oblongifoliæ—Cinchonæ officinalis cortex ruber.*
4. St. Lucia Bark. *Cortex Cinchonæ Caribbæa.*

They are all distinguished by druggists into quilled bark, or that taken from the young branches of the trees, and rolled by the natural process of siccation—and into flat

large pieces, which are deprived of their external coat or epidermis, and sometimes of the cortex altogether, leaving the liber or inner bark. The quills always have the epidermis on.

Mr. George W. Carpenter, a young man, but a short time since out of his apprenticeship with Mr. Charles Marshall, Market street, and whose druggist business he now assists in conducting, has very creditably availed himself of the facilities he has enjoyed in that business, by experimenting on the proximate principles yielded by vegetable chemistry. He has handed me the following memoranda of experiments made by him on the barks, which he proposes, in the preceding part of his MS. (not here quoted,) to be called by their provincial names, instead of any other—very justly reprobating, as I have done for many years, in my lectures, the absurdity of prescribing them by the officinal terms, *pale*, *yellow*, and *red*. You will recollect my observations on this subject, last session. I quote his experiments from his memoranda:—

"The following are some of the most important species which now occur in commerce, which I have submitted to experiments, and have given to each the comparative proportion of Quinine and Cinchonine they respectively contain. The names which are given to distinguish these several species, are derived from the provinces in which they grow.

CALISAYA BARK—2 varieties:—

1. *Calisaya arrollenda*, (quill Calisaya.) This variety is in quills, from ¾ of an inch to 1½ inch in diameter, and from 8 inches to 1½ foot in length. The epidermis is thick, and may be readily removed from the bark—hence you find, in the seroons or cases, a great proportion deprived of this inert part. It is generally imported in seroons, weighing about 150 lb, and seldom comes in cases. It has many deep transversal fissures, running parallel; the fracture woody and shining; the interior layer fibrous, and of a yellow colour. Taste slightly astringent, and very bitter. Yields a much larger proportion of the active principle, (quinine,) than any other in commerce, and consequently may be esteemed the best.

2. *Calisaya Plancha*, (flat Calisaya.) This variety consists of flat, thick, woody pieces, of a reddish-brown colour, deprived of its epidermis, and the interior layer more fibrous than that in the quill. This variety yields from 20 to 25 per cent. less quinine than the *Arrollenda*, and is consequently a less desirable article.

SUPERIOR LOXA or CROWN BARK—

The *Loxa Bark* occurs in small quills, the longitudinal edges folding in upon themselves, forming a tube about the circumference of a goose-quill, and from 6 inches to 1½ foot in length. It is of a greyish colour on the exterior, and covered with small transverse fissures or cracks; interior surface smooth, and, in fresh or good bark, of a bright orange-red; of a compact texture, and breaks with a short clear fracture. It is the bark of the *cinchona condaminia*, and is known at Loxa by the name of *cascarilla fina*. Yet, notwithstanding this bark appears to have held the decided preference to all other species, analysis fully indicates that it is not equal in medicinal strength, by at least 25 per cent. to that denominated *calisaya*. This bark is more astringent, and less bitter, than the *calisaya*. Yields from 25 to 30 per cent. less cinchonine and quinine than the *calisaya arrollenda* does quinine—and the proportion of cinchonine is much greater than the quinine.

CINCHONA OBLONGIFOLIA—2 varieties:

1. *Colorada canan*, or Quill Red Bark, which occurs in quills of various diameters, from ¼ of an inch to 2 inches in thickness; epidermis white or grey, with transversal fissures or warty concretions, of a reddish colour; interior of a brick-red colour: the cross fracture short and fibrous, the longitudinal fracture compact and shining. Taste not so bitter as the *calisaya*.

2. *Colorada Plancha*, or flat Red Bark. In very large thick pieces, from ½ to 2 inches in thickness, and from 1 to 2 feet in length: epidermis brown, thick, and rugged, with cracks running in various directions; fracture very fibrous; inside of a deep brick colour. Taste less bitter than the Quill, and of course much less than the *calisaya*.

These two varieties frequently come in the same seroon, and from their appearance, are no doubt the product of the same species, or perhaps the same tree—the quill produced by the branches, and the flat thick pieces from the trunk; or the former from young, and the latter from older trees.

This bark is generally more scarce in our market than the *yellow* or *pale*, and commands a higher price.

From experiments on the above bark, I procured 20 per cent. less cinchonine and quinine in combination of quantity, than the amount of quinine produced by the same quantity of *calisaya arrollenda* bark—and the proportion of cinchonine was rather more than half of the product of quinine. It will appear, therefore, that notwithstanding the great prejudices both of eminent authors and skilful

practitioners, which have so long existed in favour of the superiority of the *oblongifolia* (Red bark) over other species, that it is decidedly inferior to the *calisaya* (Yellow bark)—as the whole product of its active principles does not equal that of the *calisaya*, and cinchonine constituting rather more than half the product, which, according to an eminent author, is five times less active than the quinine."

The analysis of *cinchona cordifolia*, by the French chemists, yielded—

1. Yellow, odorous adipocire.
2. Yellow colouring matter.
3. Tannin, which turns iron of a green colour.
4. Red of cinchona, more abundant than in the red bark.
5. Kinate of quinine, with very little cinchonine—(the quinine, according to Pelletier and Caventou, forming 0.9 per cent. of the bark; and according to Voreton, 1.4.)
6. Fecula.
7. Woody fibre.
8. Kinate of lime.

Penn'a Hosp.

The analysis of *cinchona oblongifolia*, (Red bark,) yielded the same chemists—

1. Adipocire.
2. Yellow colouring matter.
3. Tannin.
4. Red of cinchona, (very abundant in this bark.)
5. Kinates of cinchonine and quinine—(100 parts of the bark yielding 0.8 of cinchonine, and 1.7 of quinine.)
6. Fecula.
7. Woody fibre.
8. Kinate of lime.

No. 168.—Cinchonia. Cinchonine.

Cabinet specimen, Jeff. Coll. No. 192.

One of the proximate alkaline principles of Cinchona—by which generic name is comprehended many species. It was detected by MM. Pelletier and Caventou, who, attracted to the subject by the previous researches of MM. Laubert, Strauss of Moscow, and Gomez, were led to make a refined and careful analysis. This resulted in the detection of the substance previously obtained by Gomez, which he had not ascertained, however, to be alkaline, as they did. A substance first called Cinchonin, by Dr. Duncan, Jun.—the letter *e* was added to make a euphonous accordance with other proximate principles, obtained in the

high-wrought investigations of vegetable chemistry. MM. Pelletier and Caventou obtained the *alkali cinchonia*, by operating on the Grey Cinchona, or Loxa, or Crown bark, (*cinchona condaminea.*) From the Yellow bark, (*cinchona cordifolia,*) they obtained an alkali which resembled the first in many points, but still presented such discrepancy of property, as to preclude the idea of their identity—this second principle they called *Quinina*, Quinine; and it has since become a very important article of Materia Medica, and extensively used in practice.

They next analyzed the Red bark, (*cinchona oblongifolia,*) from which they obtained Cinchonia in threefold greater quantity than the Crown bark had yielded, but nearly twice as much Quinine as they had been able to extract from the Yellow bark. The Quinine differed from the other Quinine only in its greater fusibility, and the appearance of its sulphate.

Ulterior experiments on large quantities, proved that the two alkalies existed simultaneously in all the three barks which had been analyzed as above—the Cinchonine, relatively to Quinine, being in greater quantity in the Grey or Loxa bark, while the Quinine predominates so much in the Yellow, that the presence of Cinchonine might readily have escaped notice, when small quantities were subject to experiment.

The mode of obtaining Cinchonine was, by boiling the bark in alcohol, until it lost all its bitterness—evaporating to dryness, in a water bath—dissolving the alcoholic extract entirely in boiling water, strongly acidulated with hydrochloric acid, adding an excess of calcined magnesia, which, after a few minutes' boiling, fixed all the red colouring matter, and rendered the liquor clear. When this was cold, the magnesian precipitate was washed with cold water, dried on a stove, the bitterness separated by repeated digestions in boiling alcohol. The alcoholic liquors were then mixed, and the Cinchonine crystallized as the liquor cooled. Thus obtained, the alkali contained a green fatty matter, which they separated by a solution in a very weak acid. If the acid be too strong, it will defeat the object of separation, by dissolving part of the fatty matter.

Qualities. In white, translucent, crystallizable needles, soluble only in 7000 parts of cold water. Dissolved in alcohol, or in an acid, its flavour is powerfully bitter, resembling that of Loxa bark. Slightly soluble in fixed and volatile oils, or sulphuric ether; it forms more or less soluble salts with acids. Volatilized at a certain temperature, losing much of its substance in the operation—some portion escapes the decomposing action of caloric

Brandes found its ulterior principles to consist of—

Carbon	78.4
Nitrogen	14.6
Hydrogen	7.5
	100.5

He could discover no traces of oxygen.

The sulphate and acetate of Cinchonine are used in medicine. The first is very soluble in water—the second much less so, but an excess of acid dissolves it with considerable facility.

The analysis of Pale bark, (*cinchona lancifolia,*) by MM. Pelletier and Caventou, furnished the following principles—

1. Acidulous kinate of Cinchonia.
2. A green fatty matter.
3. Red colouring matter, slightly soluble.
4. The same, soluble, (tannin.)
5. Yellow colouring matter.
6. Kinate of lime.
7. Gum.
8. Starch.
9. Lignin.

Sulphate of cinchonia is easily crystallizable, and moderately soluble. It consists of 100 parts of the alkali, and 13.02 of sulphuric acid.

Nitrate of cinchonia is uncrystallizable, and sparingly soluble.

Muriate of cinchonia crystallizes in beautiful needles—is more soluble than the preceding salts.

Oxalate of cinchonia is nearly insoluble—hence, by pouring oxalic acid, or oxalate of ammonia, into solutions of any of the soluble salts of Cinchonia, a white abundant precipitate is obtained, which resembles oxalate of lime, and is soluble in excess of acid, and in alcohol.

Gallate of cinchonia is as insoluble as the oxalate—hence a precipitate ensues, in pouring an infusion of galls into the decoctions of genuine Cinchonia.

The *Kinic Acid*, which exists in native combination with Cinchonia, is converted by heat into a substance which is crystallizable, and produces, with iron, an elegant green colour. This substance is called by the French chemists, *Acide pyrokinique.*

Medical Properties and Uses. Cinchonia, in its state of neutral salt, with sulphuric acid, has the same properties as sulphate of Quinine and the Cinchonia barks. It is not, however, so generally used; and seldom, if ever, in this country. The practical application of this salt would form

an excellent subject for an inaugural thesis, by any student who, during the recess of a session, may enjoy the practical opportunities of his preceptor. The salts with the different acids, should also be tried, and their virtues and effects ascertained.

M. Bally, in 1825, made experiments with the sulphate of Cinchonia, in order to determine its febrifuge qualities, which have been supposed much inferior to those of sulphate of Quinine. He gave it in doses of 2 grains, in pills, 3 or 4 in the apyrexia, in intermittents of various types: 16 were tertians, 9 quotidians, 2 quartans. He says, in his report, that he cured these as effectually and speedily as the Quinine could have done it; and that the medicine possesses less irritating properties than the Quinine.

MM. Double, Villerme, and Chomel, French physicians, had previously declared their belief in the identity of medicinal virtue in the sulphate of Cinchonia and Quinine.

Dose of sulphate of Cinchonia, from 1 to 10 grains—may be given in 24 hours.

Magendie has given directions for preparations of Cinchonia, which I have modified somewhat:—

Formulæ—

No. 1. *Syrupus Cinchoniæ*—Syrup of Cinchonine.

℞ Syrupi simplicis, ℥j
Sulphatis cinchoniæ, grs. l. } Mixed.

May be used as Syrup of Quinine is, and in similar cases.

No. 2. *Vinum Cinchoniæ*—Wine of Cinchonine.

℞ Sulphatis cinchoniæ, grs. ij to f℥j of Madeira wine.

No. 169.—Cinchona yields a second proximate principle—viz.

Quina. Quinine.

Cabinet specimens, Jeff. Coll. Nos. 193 and 194.

The second alkaline proximate principle of Cinchona.

In the Yellow bark, (*cinchona cordifolia,*) the chemists above mentioned first discovered the salifiable base under notice; and observing it to possess habitudes and characters distinct from No. 168, they called it *Quinine*, now *Quina*, from the Spanish name of the bark *Quinquina*. Authors have relatively compared the two principles, in point of dissimilarity, to the fixed alkalies, potass and soda.

Quina is distinguished from Cinchonia, by its incapability of crystallization, by evaporating its alcoholic solution; from which it can only be obtained in transparent plates. It is very soluble in ether; but is equally as insoluble in water as cinchonia: it is also more intensely bitter. The

salts formed by the union of Quina with acids, differ from those of Cinchonia, in a greater degree of bitterness, and different proportion of their elements. Quina seems to have less capacity for saturation than Cinchonia—100 parts of the latter will unite with 13.021 of sulphuric acid, while the same weight of Quina requires more than 10.91 of acid to saturate it.

Qualities. White, incrystallizable; the salts distinguished by a pearly aspect; soluble in ether, insoluble in water. Not used in medicine, sulphate being employed. Forms, with gallic and oxalic acids, salts as insoluble as those which the same masses form with Cinchonia.

Offic. Prep. 1. *Quinæ Sulphas*—Sulphate of Quinine. This is the most active combination of the salifiable base. It is thus prepared: Boil, for half an hour, two pounds of the appropriate bark in powder, in 16 of distilled water, acidulated with two fluid ounces of sulphuric acid—strain the decoction through a linen cloth, and submit the residue to a second ebullition, in a similar quantity of acidulated water: mix the decoctions, and add, by small portions at a time, powdered lime, constantly stirring it to facilitate its action on the acid decoction. (Half a pound is near the quantity requisite.) When the decoction has become slightly alkaline, it assumes a dark-brown colour, depositing a reddish-brown flocculent precipitate, which is to be separated by passing it through a linen cloth. The precipitate is to be washed with a little cold distilled water, and dried: when dry, is to be digested in rectified spirit, with a moderate heat, for some hours: the liquid is then to be decanted, and fresh portions of spirit added, until it no longer acquires a bitter taste. Unite the spirituous tinctures, and distil in a water bath till ⅞ of the spirit employed be distilled over. After this operation, there remains in the vessel a brown viscid substance, covered with a bitter, very alkaline, and milky fluid. The two products are to be separated, and treated as follows: To the alkaline liquid, add a sufficient quantity of sulphuric acid to saturate it: reduce it, by evaporation, to half the quantity; add a small portion of charcoal, and after some minutes' ebullition, filter it while hot, and crystals of *Sulphate of Quina* will form. These are to be dried in bibulous paper. Two pounds of the bark will yield about 5 to 6 drachms, of which 8 grains are considered equal to an ounce of bark. This is the younger Henry's process, modified by Paris.

Qualities. Crystals remarkable for their satin-like and pearly lustre; soluble in cold water, a property increased by excess of acid. It appears that it is not a true sulphate,

but a sub-sulphate; for which reason, the mixtures containing a drop or two of the sulphuric acid, or the aromatic tincture of sulphuric acid, (first prescribed, I think, by Dr. Hewson, of this city,) bring up the preparations to a sulphate—dose, gr. i, every hour, during the apyrexia. The preparations recommended by Magendie, of a syrup, a wine, and a tincture of quinine, have been superseded by the extemporaneous prescriptions and mixtures of physicians, varied according to circumstances. An acid sulphate of Quina was prepared by Robiquet—it is in solid, transparent prisms, of a flattened triangular form, well terminated, and soluble in cold water. It is however the sub-sulphate, and not this of Robiquet, in which the acid is in excess, that is employed in medicine.

Offic. Prep. 2. Acetate of Quina is remarkable for the great facility with which it crystallizes, and for the pearly aspect and agreeable stellated grouping of the crystals—whereas the acetate of Cinchonia crystallizes with difficulty, and simply in plates, transparent and devoid of lustre.

Medical Properties and Uses. The febrifuge properties of Cinchona, so long known and appreciated, are centred in this beautiful and important preparation. It has generally superseded the use of bark, in the former modes of exhibition. Doubtless there are numerous cases, to which it is equally well adapted as the bark; but I cannot help believing, from much experience with bark itself in its various forms, and with sulphate of Quina, that there still will be met with, cases to which the bark itself is peculiarly applicable; and I do know, that with the latter I have succeeded in many cases, in which the new preparation, though perfectly pure, was unavailingly tried.

Upon the whole, I view the sulphate of Quina as an invaluable accession to our therapeutic means—but must caution you, from much and unbiassed experience, against considering it altogether as a substitute which should remove the bark itself from your view, or preclude it from your practice.

The extensive use of this preparation, however, is a strong evidence of its importance. According to the report of MM. Pelletier and Caventou to the French Academy of Medicine, the large quantity of 90,000 ounces of sulphate of Quina was manufactured, in 1826, in France—a quantity which could not have been administered to less than 1,440,000 persons.

No. 170.—Cinnamomi cortex. Cinnamon. See *Laurus cinnamomum.*

No. 171.—Cinnamomi oleum. Essential oil of the preceding. See the same.

No. 172.—Citrus.

Cl. 18. Ord. 3. *Polydelphia Icosandria.* Nat. ord. *Pomaceæ,* Linn. *Aurantiæ,* Juss.

Cal. 5-cleft. *Pet.* 5, oblong. *Anthers* 20, the filaments united into different parcels. *Berry* 9-celled.

Two species—1. *Citrus medica.* The lemon tree.
2. *Citrus aurantium.* The orange tree.

Citrus medica.* Var. *β. Limon.

Officinal. *Limones. Limonum cortex: oleum.* Lond. *Citri medicæ cortex: oleum volatile: succus.* Edin. *Limon; fructus succus; epidermis, ejusque oleum essentiale.* Dub. Lemons: the rind, and its essential oil.

Cabinet specimen, Jeff. Coll. No. 195.

Native of Assyria and Persia. Qualities well known. Lemon-peel is added to stomachic tinctures and infusions. The essential oil is used to cover the smell of sulphur, in ointments made of it.

Medical Properties and Uses. Lemonade is a cooling and grateful diluent, to quench thirst, in fevers, and in violent inflammatory disease. Lemon-juice is given, alone—dose, a table-spoonful, to allay hysterical palpitations of the heart. f℥ss of the juice, to ℈j of carbonate of potass, make an effervescing draught, to stop vomiting, and act on the skin. The proportion of the salt should not be exceeded, or the mixture will excite nausea. Antiseptic in scurvy, for which it is the best remedy. The liberal supply of the Navy of Great Britain with this article, clarified and preserved by alcohol, has eradicated that disease from the service. (See W. P. C. Barton's Treatise on Marine Hospitals, and the Med. Depart. of the Navy.) It is, of late years, applied liberally to our Navy, and scurvy is unknown in it. It has been said, that the continued use of this acid is prejudicial to the health of the men, and hastens the progress of phthisis when it appears. This circumstance has been mentioned by Mr. A. T. Thompson, in his Dispensatory. I do not believe there is any ground for fearing such result, nor have I ever heard the surgeons of the British Navy make any remark of the kind. It is not the opinion, either, of the surgeons of the American Navy.

The power of lemon acid is said by Dr. Wright to be augmented by muriate of soda—he recommends such a mixture, in remittent fever, dysentery, colic, cynanche maligna, diabetes, and lientery. May be given united with camphor, infusion of cinchona, and wine, in the same diseases

Offic. Prep. Of the juice, *Syrupus limonis*. L. E. D. Of the rind, *Aqua citri medicæ*. E.

No. 173.—Citrus aurantium. The orange tree.

Cabinet specimen, Jeff. Coll. No. 196—figure of the plant. No. 197.

Officinal. *Aurantii bacca, citri aurantii cortex*. Lond. *Cortex, succus*. Edin. *Fructus succus, cortex exterior fructus immaturus, et florum aqua stillatitia*. Dub. The fruit and outer rind of the Seville orange.

Native of India and Persia. Qualities well known.

Medical Properties and Uses. Same as No. 172. The dried *unripe* fruit, (*aurantium curassaventium*, or Curaçoa orange.) used as an internal remedy in some cases, as rind of the ripe orange. Dose of either, grs. xv to ʒj, three or four times a day.

Offic. Prep. Of the juice, *Succus cochleariæ comp*. E. Of the rind, *Infusum aurantii compositum*. L. *Tinctura aurantii*. L. D. *Syrupus aurantii*. L. D. *Confectio aurantii*. L. E. D. *Aqua citri aurantii*. E.

No. 174.—Coccus Cacti. Coccus. *Cochinella*—Cochineal.

Cabinet specimen, Jeff. Coll. No. 198.

Said to be antispasmodic and anodyne, and enters into the prescriptions of some physicians for whooping cough.

No. 175.—Cocculus Indicus. The berries of *Menispermum cocculus*, which see. The proximate principle is called *Picrotoxine*—see as mentioned.

No. 176.—Cochlearia armoraciæ. The root is horseradish: see No. 76.

No. 177.—Cocos butyracea. The Maccaw tree—Butternut tree.

Cl. 21. Ord. 6. *Monoecia Hexandria*. Nat. ord. *Palmæ*.

Cabinet specimen, Jeff. Coll. No. 199.

Officinal. *Coci butyraceæ oleum fixum*. Edin. Palm oil

A palm, native of Brazil, found abundantly near the mines of Ybaquenses. The nut has a cartilaginous skin, and a fibrous pulp; its cartilaginous kernel tastes nearly like common cocoa-nut, and yields an oil called as above.

QUALITIES. Odour agreeable, resembling that of Florentine orris; taste slightly sweet; colour light lemon; consistence like butter; long keeping causes it to change to dirty white, and become rancid; is a vegetable butter.

MEDICAL PROPERTIES AND USES. Emollient, used in frictions.

No. 178.—COFFEA ARABICA. The Coffee tree.

Cabinet specimen, Jeff. Coll. No. 200.

Yields the well-known seed of the berry, and beverage. The medicinal virtues have been greatly extolled by Sir John Floyer, as a remedy for asthma. It is an improper beverage for females suffering with menorrhagia; which I have never been able to cure till it was abandoned. The pimples on the face, which annoy young girls, frequently owe their origin and continuance to the intemperate use of coffee.

No. 179.—COLCHICUM AUTUMNALE. Meadow saffron—Naked lady. The root and seeds.

Class, *Hexandria.* Order, *Trigynia.* Nat. ord. *Spathacea,* Linn. *Junci,* Juss.

Cabinet specimen, Jeff. Coll. No. 201—figure of the plant, No. 202.

OFFICINAL. *Colchici radix et semina.* Lond. *Colchici autumnalis radix.* Edin. *Colchicum, radix primo vere foliis jam apparentibus.* The root of Meadow Saffron *Colchicum autumnale: radix.* U. S. The root of Meadow Saffron.

Root, a solid succulent bulb, marked by a dentiform process at the bottom, where the radicles are attached. It is covered with a brown membranous sheath, or investment, which, being removed, shows the naked bulb, as white, and of the appearance of polished ivory. This bulb is oblong, and marked always on one of its sides by a semilunar notch, produced by the young offset bulb, which was imbedded in it. This notch is perceivable in all the sections of the dried and sliced root of the shops.

The flower is solitary; arises immediately from the root, by a tube a span in length, curving towards the limb of the corolla, which is divided into six lanceolate obtuse purple segments, somewhat spreading. It appears in the autumn, after the leaves have decayed—and hence the names, as above.

Leaves numerous, all radical, lanceolate, sub-obtuse; one, two, or rarely three, much longer and narrower than the others. These may be considered as bracts, not true leaves.

Filaments 6, tapering, white, much shorter than the monopetallous corolla: anthers erect, pointed, yellow; germen radical, sending forth 3 slender styles, reflexed at the top, in the bosom of the flower, and supporting simple pointed stigmas; capsule 3-lobed, 3-celled, containing numerous small globular seeds, resembling somewhat rape-seed, but longer, and not so dark.

These do not ripen until the succeeding spring, when the capsule rises above the ground, on a strong peduncle.

Native of England, being generally found in meadows, of rich soil—not uncommon. Flowers in September.

Supposed to be hemadactyl of ancients. Bears cultivation in the United States, in a moist rich soil, protected from the sun.

Medical Properties and Uses. Recent root, an acrid irritating poison—has produced death in several instances, after great agony. Stoerck, Errhman, Marges, Murray, found it poisonous to oxen and dogs, in small doses—killing them in a few hours, and leaving the stomach and bowels inflamed and gangrenous. Scudamore more recently attested its poisonous effects on dogs, given per orem, and by injection into the jugular vein. Haller, Krapf, and Kratochville, declare it innoxious—they probably used the plant in its weak state; that is, when the bulb has been deprived of its power and acrimony, by having given its juices to the new bulb, and when it was itself decaying, as is the nature of bulbous roots; or perhaps they used the roots of other plants, resembling the roots of colchicum. Its poisonous property is now well established, and admitted universally.

The acrimony of Colchicum resides in a peculiar alkali, which can be separated from the other principles. M. Pelletier has named it *Veratria*, or *Veratrine*, which see. The root of Colchicum, according to the analysis of MM Pelletier and Caventou, yields—1, a fatty matter, composed of oil, adipocire, and a volatile acid; 2, yellow extractive colouring matter; 3, acid gallate of veratrine; 4, gum; 5, fecula, with inulin and woody fibre. It yields very few ashes.

Introduced by Stoerck, as a remedy for dropsy—using an infusion of 3 grains fresh root, in 4 oz. wine, as a diuretic: used, afterward, the *oxymel colchici*, to obviate the acrimony, by the acetous preparation. Now used for gout and rheumatism. Has been made almost certain, by Scudamore, to be the only article in the *Eau Medicinale*. His experiments prove the identity with that nostrum, and with Wilson's tincture, and Reynolds's specific.

Sir Everard Home says, the wine and tr. are milder without the sediment—Scudamore found the sediment

without power. He recommends the acetic tr. with sulphate of magnesia, as the mildest, safest, and most effectual—says, it is thus inoffensive to the stomach, and never produces hyper-catharsis. He used a tr. of 1 oz. fresh roots to a pint of liquor. Home used 21 ounces to 16 of fluid, which is more than it can take up, and certainly too strong.

Proof-spirit appears to be the best solvent of the powers of this root—the tr. is therefore the most active preparation. Wine of the roots is next, but must be carefully used. Wine of the seeds least active, and less acrid than all other preparations.

Considering the gout nostrums as identical with Colchicum, they stand thus: No. 1. Eau Medicinale. No. 2. Wilson's Tincture. No. 3. Reynolds's Specific. No. 4. Tr. Colchici. No. 5. Wine of roots. No. 6. Wine of seeds. No. 7. Acetic preparation. All, in reference to power and safety, inversely from No. 1.

Dose, of the saturated vinous infusion, f℥ss to f℥j, whenever the patient is in pain—in substance, grs. iij to grs. ix, of the dried bulb.

Offic. Prep. *Acetum colchici.* L. *Oxymel colchici.* D. *Syrupus colchici autumnalis.* E. *Vinum colchici.* L.

No. 180.—Colchici Semina. Seeds of the preceding.

Cabinet specimen, Jeff. Coll. No. 203.

Dr. Williams, of Ipswich, says, they possess all the virtues of the bulb, without its pernicious qualities. He recommends a vinous infusion. He found them tonic, and, unlike other narcotics, not to produce cerebral congestion. They ought not to be bruised, as their medical virtue (he says) resides in the pellicle. Can this be the fact?

No. 181.—Colocynth. Bitter apple. *Coloquintida.* The dried pulp of the fruit of *Cucumis colocynth*, which see.

No. 182.—Conein. The active principle of the following.

No. 183.—Conium maculatum. Common Hemlock.

Cl. 5. Ord. 2. *Pentandria Digynia.* Nat. ord. *Umbellatæ.*

Officinal. *Conii Folia, et semina.* Lond. *Conii maculati folia.* Edin. *Cicuta.* Dub. The leaves and seeds of Hemlock.

Cabinet specimen, Jeff. Coll. No. 204—figure of the plant, No. 205.

An umbelliferous plant, growing by hedges, road-sides, and among rubbish, in Europe—not indigenous, as has incorrectly been said by some who ought to know better. It is important to recollect this, because *Cicuta maculata*, another umbelliferous plant, (No. 165,) has been mistaken for it. Hemlock may be distinguished from other umbelliferous plants, which all resemble each other, by its large and spotted stem, (whence the name,) by the dark and shining colour of the lower leaves, and their disagreeable smell. When fresh and bruised, they are said to resemble the urine of the cat—and that's disagreeable enough. This smell, however, is a bad criterion; for some persons like an odour excessively disagreeable to others. Botanical acumen is infallible, and indispensable in the natural family to which this plant belongs.

Qualities. The odour of dried hemlock leaves, is heavy, strong, narcotic, not so disagreeable as that of the fresh leaves; taste slightly bitter and nauseous; easily pulverized—the powder should retain the beautiful green colour of the leaves. When properly dried, the leaves only lose their acrimony, retaining their narcotic virtues.

The virtues of Conium are extracted by alcohol and sulphuric ether. To the ether it communicates a deep green hue; and when the tincture is evaporated on the surface of the water, a dark green resin remains, containing the narcotic principle of the plant, possessing both the peculiar odour and taste. Half a grain of it produces head-ache, and slight vertigo. This is the discovery of Mr. A. T. Thompson. Dr. Paris calls it *Conein*. Orfila has proved by experiment, that the aqueous extract of this plant possesses little power. No part of the plant is destitute of efficacy; but the leaves are most active. The energy of the plant is greatly diminished by vegetable acids. Vinegar is therefore its antidote.

Medical Properties and Uses. Powerfully sedative; allays morbid irritability. Dr. Paris observes, "according to my own experience, it is, in well-directed doses, by far the most efficacious of all palliatives, for quieting pulmonary irritation." Used in scirrhus and cancer. Externally, affords relief to ulcers of an irritating kind—for this purpose, used in fomentations or cataplasms. The dried leaves may be made into pills. Dose, grs. iij, gradually increased, until some effect is produced.

Cicuta maculata and *Cicuta virosa*, (or water-hemlock,) *Æthusa cynapium*, (or fool's parsley,) *Caucalis anthriscus*, and some species of *Chærophyllum*, have all been mistaken and used for hemlock.

Offic. Prep. *Extractum Conii.* L. E. D. & U. S.

Formulæ—

No. 1. ℞ *Conii foliorum exsiccat.* ℥j, *boiled in* Oijss to Oij.
Panni lanci pocce decocto calido madefacti, deinde expressi parti affectæ imponantur, et sæpius renoventur. *Collin.*
In carcinomatous, venereal, and sordid ulcers.

No. 2. ℞
Conii foliorum exsiccat. ℥ij
Medullæ panis, ℥vj
Aquæ, Oiss
Boiled together, for a cataplasm.

No. 3. ℞
Extract. Conii,
——— Hyoscyam. āā grs. v
Mucilag. Acaciæ, f℥ij
Rubbed together until well mixed—then add
Liquor. ammon. acetat.
Aquæ puræ, āā f℥ss
Syrup. Rhœados, f℥j
A draught to be taken every fourth hour, in pulmonary irritation. *Paris.*

No. 184.—Convolvulus. Bind-weed.

Cl. 5. Ord. 1. *Pentandria Monogynia.* Nat. ord. *Campanaceæ,* Linn. *Convolvuli,* Juss.

Species—

1. *Convolvulus scammonium.*
2. ——— *jalappa.*
3. ——— *panduratus,* (indigenous.) See W. P. C. Barton's Veg. Mat. Med. U. S. Vol. II.
Cabinet specimen, Jeff. Col. No. 206—figure of the plant, No. 207.
4. *Convolvulus turpethum. Turbith—Turbeth—Turpethum.* Root has qualities similar to jalap, but harsher in its operation.
5. *Convolvulus cneorum.* Rock rose. *Cneorum album. Doryenium.* Root purgative.
6. *Convolvulus minimus—convolvulus cantabriga—cantabriga.* Lavender bind-weed. Herb vermifuge.
7. *Convolvulus mechoacanna—mechoacanna alba.* Mechoachan. Root less active than jalap, and not so fatiguing—called sometimes white jalap, and mixed with real jalap.
8. *Convolvulus soldanella—soldanella—brassica marina.* Sea colewort. Scotch scurvy-grass. Root a strong hydragogue, used in Germany.
9. *Convolvulus floridus.* Root errhine.

10. *Convolvulus sepium,*
11. ——— *arvensis,* } The juices of these purgatives.
12. ——— *brasiliensis.* Sea-side potato-slip. Root, in decoction, purgative; yields a kind of Scammony.
13. *Convolvulus scoparius.* African lignum Rhodium. Wood hard, white, radiately streaked; raspings have the scent of roses; distilled for its oil, called the Oil of Rhodium; also as an errhine.
14. *Convolvulus Papirin.* Root a drastic purgative.
15. ——— *tuberosus.* Root cathartic.
16. ——— *macrorhizos.* Roots used as purgative.
17. ——— *macrocarpus.* Roots used as purgative.
18. ——— *maritimus.* Roots purgative.

No. 185.—Convolvulus Scammonia. Scammony bind-weed. The concrete juice of the root.

Cabinet specimen, Jeff. Coll. No. 208—figure of the plant, No. 209—of concretes, Nos. 210 and 211.

Officinal. *Scammoniæ gummi resina.* Lond. Edin. *Scammonium; gummi resina.* Dub. Scammony.

Synonyms—*Convolvulus Syriacus.* (Morison's Hist.)
Scammonium Syriacum. (Gerard.)
Supposed to be the Διαγρυδιον of Dioscorides, and the Διαγρυδιον of Italian, and other Greek authors.

Specific character. *Convolvulus foliis sagittatis posticæ truncatis, pedunculis teretibus sub-trifloris.*

Grows plentifully about Maraash, Antioch, Edlib; and towards Tripoli, in Syria.

Root fusiform, from 3 to 4 feet long, and from 9 to 12 inches in circumference, covered with bark of a light grey colour, and is perennial; it is branched towards the bottom, and every part of it contains a milky juice.

Stems numerous, slender, twining, and spread themselves on the ground, or climb on neighbouring shrubs or trees, to the extent of 15 or 20 feet.

Leaves arrow-shaped, smooth, of a bright green colour, and supported by long petioles.

Flowers funnel-shaped, yellowish, plicated, supported in pairs on pedicels. *Calyx* double, consisting of 4 emarginated leaflets in each row.

Capsules 3, and often 4-locular, containing pyramidical-shaped seeds.

A native, besides the places mentioned, of many parts of Asiatic Turkey; flowering in early summer.

Medical Properties and Uses. The whole plant, either dried or fresh, is inert, except the root. It is the milky juice of this, which produces the pure Scammony of the shops.

Mode of obtaining it.—Having cleared away the earth from about the root, in the beginning of June, the peasants cut off the top in an oblique direction, just below the corona, or about two inches from the point whence the stems arise, and below it. Under the most depending part of the slope, they fix a shell, or some such utensil or receptacle, into which the juice flows spontaneously. It is left there about 12 hours, which suffices for draining off the whole juice: this is in small quantity, each root affording but a few drachms. The juice from the several roots is added together, often in an old shoe, or leg of a boot, for want of something better, where, in a little time, it grows hard, and is the genuine Scammony.

This concrete is a gummy resin, of a light, shining grey colour, and friable texture. It is brought from Aleppo and Smyrna—that from the latter place is less valued than the Aleppo kind; is generally said to be heavier, and of a darker colour. This is owing to the craft and cupidity of the Jews, who make it their business to go where the Scammony is prepared, and buy it, while yet soft, of the peasantry; mix with it, wheat flour, sand, ashes, soot, and various other articles, with which Dr. Russel found it adulterated: they have not the same opportunities at Aleppo. That from Smyrna is commonly mixed with the expressed juice of *Cynanchum monspelianum*—oftener sophisticated with flour, sand, or ashes. Good scammony should be friable, and when wetted with the finger, should *luctify*, or become milky; and the powder should give out the characteristic odour, which has been compared to that of old ewe-milk cheese.

The purest Scammony is that which is most active and soluble. The colour is not a sufficient criterion of its goodness or purity—the fine and pure appearance of the concrete, alone, is the proper test. The smell of Scammony is unpleasant, and the taste bitterish and slightly acrid. Proof-spirit is its best menstruum.

The Arabian physicians used it, both externally and internally—the first, as a remedy for tumours, scabies, tinea, deep-seated pains, &c.; internally, as a purgative. It was then, and is now, seldom used alone, but compounded with other drugs, in medicines of great repute. Hoffman deemed it dangerous, and says he rarely ventured to use it. Boerhaave restored its use, as a safe and stimulating cathartic, and says he frequently used it uncombined, without producing tormina or hyper-catharsis.

Like all resinous cathartics, its dose is somewhat varying, owing to its uncertainty of operation. Dose, from 5 to 12 grains.

Compound powder of Scammony contains the hard Scammony, hard extract of jalap, each 2 oz. and root of ginger, ½ oz. rubbed separately into fine powder, and mixed.

Offic. Prep. *Confectio Scammonix.* L. D. *Pulvis Scammonia comp.* L. E. *Extractum Colocynthidis comp.* L. *Pulvis Cornu cervi comp.* L.

Formulæ—

No. 1. ℞
Aloës spicat. ℈j
Scammoniæ, gr. xij
Extract. Rhei, ℈ij
Bac. Capsici, pulv. gr. vj
Olei Caryophyll. ♏v
Made into 16 pills, of which 2 may be taken going to bed, *pro re nata.*

No. 2. ℞
Scammoniæ, gr. v
Pulv. Rhei, gr. xv
Ammoniæ sub-carb. gr. v
Made into a powder, to be taken in any convenient vehicle.

No. 186.—Convolvulus Jalappa.

Officinal. *Jalapæ Radix.* L. E. D. & U. S. Jalap.

Cabinet specimens, Jeff. Coll. No. 212 and No. 213—figure of the plant, No. 214.

Native of South America, taking its name from the city of Xalapa, in Mexico—first introduced into Europe in 1609.

Qualities. Good Jalap has a sweetish, heavy, peculiar odour, when broken: a sweetish, somewhat pungent taste; is heavy, compact, hard, dark black-brown exteriorly—breaks with a shining resinous fracture, showing the internal part of a yellowish grey colour, interspersed with deep-brown concentric circles; is pulverulent, furnishing a powder, of a pale brownish yellow colour; root contains resin, gum, extractive, fecula, lignin, and some salts. The combination of the three first principles seems requisite for the production of its *full* cathartic effect. This forbids the idea of some, who have supposed the active principle to be a simple principle, and have called it *Jalapine.* The resin of Jalap, in the Cabinet, is much used in Europe.

Medical Properties and Uses. A safe, active, searching cathartic—said, most absurdly, to act chiefly on the colon. Could any one have taken Jalap, who said this? I wonder

on what it does not act *principally*—it scours, scrapes, and sweeps all before it, from the stomach outward. United with crem. tart. it is a hydragogue cathartic. Given usually with calomel, as is well known. Dose, grs. x to ʒss.

Adulterated with mechoacana and briony-root—not often.

Offic. Prep. *Pulv. Jalap. comp.* E. *Extract. Jalapæ.* L. E. D. *Tinct. Jalapæ.* L. E. D. *Tinct. Sennæ comp.* E.

No. 187.—Confectiones, of the Colleges. Confections.

The following are the principal employed in modern practice. In the United States, we seldom use confections—No. 8, however, ought to be more frequently used for children.

1. *Confectio Amygdalarum.*
2. ——— *Aromatica.*
3. ——— *Cassiæ.*
4. ——— *Opii.*
5. *Confectio Rosæ caninæ.*
6. ——— *Rosæ Gallicæ.*
7. ——— *Scammoniæ.*
8. ——— *Sennæ.*

No. 188.—Contrajervæ Radix. L. E. The root of *Dortensia contrajerva.*

Rarely used, except by the Spaniards, who consider it an antidote to poisons. Dose, grs. v to ʒss.

Cabinet specimen, Jeff. Coll. No. 215—figure of the plant, No. 216.

No. 189.—Copaifera officinalis. Copaiva tree.

Cl. 10. Ord. 1. *Decandria Monogynia.* Nat. ord. *Dumosæ*, Linn. *Leguminosæ*, Juss.

Native of South America and the Spanish West Indies.

Officinal. *Balsamum Copaibæ.* Copaiba Balsam of the Colleges.

Cabinet specimen, Jeff. Coll. No. 217—figure of the tree, No. 218.

Qualities. Pale golden yellow; somewhat of the consistence of oil; of an odour peculiar and fragrant; taste aromatic, bitter, sharp; consists of resin and essential oil, and no benzoic acid; is not a balsam; insoluble in water—soluble in 10 parts of alcohol and in essential oil.

Medical Properties and Uses. Diuretic, laxative; acts on the urinary passages, imparting a bitter taste to the urine; used in gleets, fluor albus, and gonorrhœa; sickens and deranges the stomach excessively. Mr. James Thorn, of the *Royal Coll. of Surg. Lond.* has obtained an extract, which he represents as very efficacious in gonorrhœa, by

distilling Copaiba—more than a moiety of a very acrid offensive volatile oil is expelled, leaving a brown resinous extract, becoming hard and brittle when cold. In this, according to Mr. Thorn, all the virtues of the balsam reside. He gave grs. x, in pills, three times a day. Dose of the balsam, ℥ss to ℥j, three times a day.

Often adulterated, and frequently entirely factitious. According to Bucholz, is adulterated if a mixture of 4 parts of pure alcohol, and one of rectified ether, does not dissolve it.

No. 190.—Coptis Trifolia. Gold-thread—mouth-weed. The root.

Synonym—Helleborus trifolius.

Indigenous—very bitter—used in aphthæ. Dose, of the tincture, f℥j—of the decoction, f℥j. See W. P. C. Barton's Veg. Mat. Med. U. S. Vol. II. for a detailed account.

Cabinet specimen, Jeff. Coll. No. 219—figure of the plant, No. 220.

No. 191.—Coriaria myrtifolia. A deadly, narcotic, poisonous plant.

No. 192.—Cornua of the Colleges. *Cervus Elapus.*

Cabinet specimen, Jeff. Coll. No. 221.

Stags' or harts' horns were formerly used for the preparation of Ammonia—hence that alkali was called spirit of hartshorn.

No. 193.—Cornus. Dogwood.

Indigenous. Three species medicinal—introduced into the Phar. U. S.

1. *Cornus florida.* Dogwood tree—New-England boxwood.

Cabinet specimen, Jeff. Coll. No. 222—figure of the tree, No. 223.

2. *Cornus Sericea.* Swamp dogwood—Red willow.

Cabinet specimen, Jeff. Coll. No. 224—figure of the tree, No. 225.

3. *Cornus circinata.* Mountain willow—Round-leaved dogwood.

Cabinet specimen, Jeff. Coll. No. 226—figure of the tree, No. 227.

For a detailed account of Nos. 1 and 2, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. I. For No. 3, Ives' edition of Paris's Pharm. Vol. II. p. 118.

No. 194.—Cornia. Cornine.

Cabinet specimen, Jeff. Coll. No. 228—and duplicate, No. 228.

The proximate alkaline febrifuge principle of *Cornus florida* bark. Analogous to Quina; unites with acids, like it, forming neutral salts.

The *sulphate of Cornia*, in the Cabinet, was presented by Mr. Frederick Brown, as a sample of that manufactured by Farr & Kunsi, of this city. Mr. Carpenter has prepared considerable quantities of this article; and he has understood from those physicians who have used it, that in the same doses as sulphate of quinine, it has cured intermittents. Dr. Morton has published an account of this preparation in the *Philad. Journ. of Med. & Phys. Sciences.* Mr. Carpenter claims the discovery of this principle in dogwood. He has obtained an extract of this bark, which resembles that of Cinchona, but less bitter and more astringent. The duplicate specimen is Mr. C.'s *Cornia.*

No. 195.—Coriandrum sativum.

An umbelliferous plant, yielding the aromatic Coriander seeds.

Cabinet specimen, Jeff. Coll. No. 229—figure of the plant, No. 230.

No. 196.—Creta preparata. Prepared chalk. See No. 127.

Cabinet specimen, Jeff. Coll. No. 231.

No. 197.—Creyat root. The root of *Justicia paniculata*, which see.

No. 198.—Crocus sativus. Common saffron.

Cl. 3. Ord. 1. *Triandria Monogynia.* Nat. ord. *Ensatæ*, Linn. *Irides*, Juss.

Officinal. *Croci stigmata.* Lond. *Croci sativi stigmata.* Edin. *Crocus.* Dub. *Crocus sativus stigmata.* U. S. The stigmas.

Cabinet specimen, Jeff. Coll. No. 232—figure of the plant, No. 233.

Qualities. Odour sweet, penetrating, diffusive; taste warm, bitterish: 100 parts consist of 62 extractive, called by Bouillon Lagrange, and Vogel, *polychroite*—the remaining parts are chiefly ligneous fibre, with some essential oil and resin; soluble in water, alcohol, proof-spirit, wine, vinegar, and less so in ether.

Medical Properties and Uses. *Exhilarating*, anti-hysteric, chiefly used in pharmacy—enters into numerous preparations.

No. 199.—Croton.

Cl. 21. Ord. 8. *Monœcia Monodelphia.* Nat. ord. *Tricocca*, Linn. *Euphorbiæ*, Juss.

Four species—

1. *Croton Eleuteria*, } Eleutheria.
   Synonym—Clutia Eleuteria, Linn. }
2. *Croton Tiglium.* Purging Croton.
3. ——— *Liniare.*
4. ——— *Humile.*

CROTON ELEUTERIA—

Officinal. *Cascarillæ cortex.* Lond. Dub. *Croton Eleutheriæ cortex.* Edin. & U. S. **Cascarilla Bark.**

Cabinet specimen, Jeff. Coll. No. 234—figure of the tree, No. 235.

A small tree, native of the Bahama Islands and Jamaica. The bark is chiefly imported from Eleutheria, one of the islands above—hence it was long called Eleutheria Bark.

Qualities. In small curled pieces, rolled up in short quills; fracture smooth and close; dark-brown colour; pleasant spicy odour; warm, bitter, aromatic taste; inflammable, emitting, when burnt, the fragrance of musk—by which it can be distinguished from all other barks. Its activity is entirely taken up by proof-spirit; ether takes up one and a half in 10 parts; and when evaporated on the surface of water, leaves a thick pellicle of bitter resin—and, dissolved in water, a small portion of nearly colourless, pungent extractive. Tromsdorf's analysis proved that 4696 parts yielded—mucilage and bitter principle, 864; resin, 688: volatile oil, 72; water, 48; woody fibre, 3024.

Medical Properties and Uses. An aromatic tonic. Dose, grs. iij to ʒss of the powder, three or four times a day.

Offic. Prep. *Infus. Cascarillæ.* L. *Tinct. Cascarillæ.* L. D *Extract. Cascarillæ.* D.

No. 200.—Croton Tiglium. Purging Croton.

Synonym—Pinus Indica, Lignum Moluccense.

This plant is a native of the Moluccа Islands, and of the peninsula of India. Every part active; root drastic, purgative: its shavings used in dropsy, in Amboyna and Batavia: leaves purgative; dried and powdered, are externally used as an antidote for the poison of the *cobra del capella.* The seeds are chiefly used for medicinal purposes—were formerly taken to Europe, under the name of Moluccа grains. The expressed oil of the seeds has, within a few years past, been introduced into the Materia Medica, under the

name of Oil of Croton. In India, the torrified seeds are used as a drastic hydragogue purgative. The kernels contain, according to the analysis of *W. T. Iliff*, (Lond. Med. Repos. Jan. 1822,) in 100 parts of the kernels, 27 acrid principle, 33 fixed oil, 40 farinaceous matter. The oil itself is composed of 45 acrid principle, 45 of fixed oil.

Dr. Nimmo ascertained that alcohol, in solution, is the best vehicle for administering the active principle of Croton oil—he gives this formula:—

℞ Alcohol. Crot. ℥ss
Syrup. simpl.
Muc. Gum. Arab. āā ʒij
Aquæ distillatæ, ℥ss M.

According to Mr. Robert Dayly, of the Medical Store Department, Madras, *Croton Tiglium* proved an emenagogue, in the hands of Mr. Underwood, at the Medical Asylum, in fifteen cases of obstructed catamenia, which it reproduced.

Croton Oil, called in India *Nervalum unnay*, was introduced into the shops of this city, a few years ago; and, among others, I have prescribed it. It is a drastic hypercathartic. In some cases, according to authors, merely touching the tongue with a drop of it, has produced many loose watery stools: in others, doses of one or two minims have excited the most terrible hypercatharsis. It is said, however, that 10♏ have been given, in Europe, to some persons, without any very sensible effect. *Mr. Ingledon* gave the newly-expressed oil, in doses of 5♏, in 1815—but soon laid it aside, as too violent in its operation. In India, it is regarded as a valuable external application, in rheumatic affections.

The regular dose is one drop—rarely two—given in form of pill, made up with crumb of bread. It may be given mixed with mucilage and sugar. When it produces alarming effects, the native practitioners of India give, internally, butter with orange or rice water, or cold buttermilk, and apply externally cold affusions of water.

No. 201.—Croton Liniare. Native of Jamaica.

The powder of the dry leaves used in colic, according to Barham.

No. 202.—Croton Humile. Native of Jamaica.

Hot, pungent; used in baths and fomentations, for nervous weakness, according to Brown.

There are fourteen species of Croton, native of Jamaica, of which the three enumerated are all, according to Lunan, which are medicinal.

No. 203.—CUCUMIS COLOCYNTHIS. Bitter cucumber—bitter apple. *Coloquintida.* Colocynth. The pulp of the fruit.

Synonym—Colocynthis fructu rotundo major. (Baulin.)
κολοκυνθις; κολοκυνθα αγρος of the Greek authors.

Cl. *Monoecia.* Ord. *Syngenesia.* Nat. ord. *Cucurbitaceæ.*

Cabinet specimen, Jeff. Coll. No. 236—figure of the plant. No. 237.

Fruit a round pomum, the size of an orange, divided into 3 cells, abounding with a pulpy matter, separated every where by membranous texture, including many ovate, compressed, white seeds. The colour of the fruit is at first green, afterward yellowish, in proportion as it ripens, or streaked with yellow and green, and very smooth, covered with a fine, light, and hard bark. It is said, that when the fruit is larger than a St. Michael's orange, and the seeds pointed, long, and narrow, and tipped with black, it is not good—see Paris (Pharm.) and others.—This is incorrect.

Native, it is believed, originally of the Levant and the Islands of Greece. It is imported into Europe and this country, for medical purposes, from Turkey, and was cultivated in England in the time of Turner.

MEDICAL PROPERTIES AND USES. After having separated the pulp of Colocynth, the Indians send it to Aleppo, from whence we receive it dry, spongy, light, of a faint disagreeable odour, of an acrid, disagreeable, and excessively bitter taste. According to Carthusa, this pulp contains near one-half of its weight of mucilage, and a resinous matter, which possesses, in a high degree, the irritating and purgative qualities of the Colocynth. The mucilage is so tenacious as to resist the filter, and pass with difficulty through a strainer; and is readily formed, by the addition to the pulp, of boiling water. Even a tr. made of proof-spirit, is so slimy as to resist the filter. The watery decoction, inspissated, yields an extract which purges strongly, but with less irritation than the pulp in its dried state, and with greater safety.

It is a drastic, irritating, and rather dangerous cathartic. The violence of its action is well attested, having produced poisoning in many cases: violent colic, bloody evacuations, pains and sweats, convulsions, erosions and ulcerations of the intestines, are phenomena which have not uncommonly followed its exhibition. Hence Carthusa proposed to banish it from the Materia Medica.

Hoffman only employed it in the most intractable and desperate cases of disease. Used in serous apoplexy,

dropsies, coma, chronic diseases of the skin, mania, melancholy, paralysis, painter's colic, hydrothorax, for worms, and suppression of urine—in gout, rheumatism, and articular diseases, and in pains occasioned by obstructed viscera. Schrœder and Faber say, its use in syphilis is attended with great success. Geoffroy says, the pulp, applied to the umbilicus, acts as a purgative and anthelmintic; and it has been remarked, that it purges if retained long in the hands of druggists, who make it into pills.

Faber used it in syphilis, by digesting the pulp in wine, with different aromatics. Sennert says, the dose is not to exceed 6 grains.

It is always necessary to mitigate its action, by triturating it with gum tragacanth, or some oily or mucilaginous substance. The proportion of the infusion is 1 scruple of the pulp to 2 pounds of liquid. Its great bitterness makes it rarely admissible.

The dose of 2 to 4 grains of the resinous extract, is one of the most violent purgatives known.

The sacred wine, mentioned by French writers, is nothing but a vinous maceration of Colocynth, which often vomited in a dose of from 1 to 4 spoonfuls.

The pulp of Colocynth enters as a material component of numerous empiric pills and preparations, and in many pharmaceutical preparations of the Lond. Edin. and American Dispensatories.

The compound extract of Colocynth, is the preparation now chiefly used in England and in this country.

Offic. Prep. *Extractum Colocynthidis.* L. *Extract. Colocynthidis comp.* L. D. *Pillulæ Aloes cum Colocynthide.* D.

No. 204.—Cuminum cyminum. Cumin.

Officinal. *Cumini semina.* Lond. Cumin seed.

Cabinet specimen, Jeff. Coll. No. 238—figure of the plant, No. 239.

An umbelliferous pentandrous plant, native of Egypt, yielding seeds of a strong, peculiar, heavy odour, and a warm, bitterish, disagreeable taste; used chiefly as an external stimulant for indolent ulcers.

No. 205.—Cuprum. Copper.

In its metallic state not used, and innoxious if by accident swallowed. It readily forms salts with acids—of which three are medicinal, viz.

No. 206.—Cupri sub-acetas. Edin. Sub-acetate of copper. Verdigris. *Ærugo.* Lond. Dub.

Cabinet specimen, Jeff. Coll. No. 240.

Qualities. When good, is inodorous; first taste insipid, after taste styptic, leaving a strong metallic taste in the mouth. The mass is dry, not deliquescent, of a hard, pulverulent foliaceous texture, and a beautiful apple-green hue.

Medical Properties and Uses. Tonic and emetic—used in epilepsy for the first effect, and for the other in cases requiring a speedy evacuation of the stomach. Its internal administration is dangerous; as an escharotic, is useful. Has been used as a collyrium, in chronic ophthalmia. Dose, as tonic, under half a grain—as an emetic, from gr. i to grs. ij. In over-doses, a poison, quickly producing death. Duval and others assert, from experiments, that sugar is an antidote.

Offic. Prep. *Ærugo præparata.* D. *Ung. sub-acetatis Cupri.* E. *Linimentum Æruginis.* L. D. *Cupri sub-acetas præparatum.* U. S.

No. 207.—Cupri sulphas. L. E. D. & U. S. Sulphate of copper—blue vitriol.

Qualities. Found in the shops in ultra-marine blue, semi-transparent, rhomboidal prisms; inodorous, of a harsh, acrid, styptic taste, and liable to slight efflorescence. Treated with sulphuric acid, no effervescence takes place, by which it can readily be distinguished from No. 206. Specific gravity, 2.1943; and according to Chenevix, it consists of 42.6 parts of hydrate of copper, 33.0 of acid, and 25.4 of water of crystallization. Soluble in 4 parts of water at 60°, and less than 2 at 212°; insoluble in alcohol.

Medical Properties and Uses. Emetic, astringent, and tonic, internally—externally, an escharotic: has been used for the first property, in incipient phthisis, in croup, and when laudanum has been taken in an over-dose; for its astringency, in alvine hæmorrhages, intermittent fever and epilepsy, and other spasmodic affections; pledgets of lint dipped in a solution of it, as a styptic in epistaxis, stuffed up the nostrils. A weak solution in water is an excellent collyrium, in ophthalmia. Forms the base of Bates's *Lana Cupro-Ammoniata*, recommended by Mr. Ware for purulent infantile ophthalmia. Equal parts of this salt and tart. emet. make the dry vomit of Maryatt.

Dose, as an emetic, grs. j to grs. xv—as tonic, gr. $\frac{1}{4}$—for a collyrium, $\frac{1}{2}$ to 1 or 2 grains to the ounce of distilled water.

Offic. Prep. *Solut. Cupri Sulphat. comp.* E. *Cuprum Ammoniatum.* L. E. D. *Cupri Sulphatis liquor.* U. S.

Formulæ—

No. 1. ℞ Cupri sulphatis, grs. x—℈j ℥
Aquæ distillatæ, f℥ij ℨ
An emetic draught.

No. 2. ℞ Cupri sulphatis, ʒss ℥
Aquæ rosar. f℥viij ℨ
A lotion, in phagedenic ulcers of the face, and for allaying itching, when attended with erysipelatous inflammation about the anus and labia pudendi.

No. 3. ℞ Cupri sulphatis, grs. iij
Acidi sulphurici, ♏ x
Aquæ distillatæ, f℥ij
Mix by shaking.
A solution, designated in the last mentioned officinal preparation preceding.

No. 208.—Cuprum ammoniatum. L. D. *Ammoniaretum Cupri.* E. Ammoniated copper. *Cupri Ammoniaretum.* U. S. Ammoniaret of copper.

Cabinet specimen, *Jeff. Coll. No. 241.*

A triple salt, being a sub-sulphate of oxide of copper and ammonia.

Qualities. A violet-coloured mass, which, on exposure to air, becomes green; taste styptic, metalline; odour ammoniacal. f℥j of water dissolves ℈j.

Medical Properties and Uses. Tonic, antispasmodic—preferred by Cullen, who introduced it, to No. 207. May be made into pills with bread—sugar must not be added, as it lessens its activity. Used in various convulsive diseases, attended with gastric derangement. Michaelis, Gregory, Tissot, Odier, Duncan, and Bland, have commended it. More recently, Dr. Batt has recommended it in epilepsy, in combination with valerian. Brera thinks it equal to arsenic, in intermittents. B. Bell gave it, with success, in spasmodic cough; and Walker, in chorea. Theussink commends it, in chronic hysteric affections.

Dose, ¼ gr. cautiously increased to grs. v, twice a day.

Offic. Prep. *Liquor Cupri Ammoniati.* L. *Cupri Ammoniareti Liquor.* U. S.

No. 209.—Curcuma Zedoaria. Zedoary.

Synonym—*Amomum Zedoaria.* (Willd.)

Officinal. *Zedoaria Radix.* Dub. Zedoary root.

Cabinet specimen, Jeff. Coll. No. 242—figure of the plant, No. 243.

Native of East Indies—named *Acua* by the Brahmins. Fragrant like camphor, biting, aromatic, bitterish, with some acrimony; an aromatic tonic. Dose, of powdered root, grs. viij to ʒss, two or three times a day.

No. 210.—Cubebs. The berries of *Piper Cubeba*, which see.

No. 211.—Cusparіæ Cortex. See No. 116.

No. 212.—Curare. Poison found in a plant called *Vejuco de mavacure.*

The genus yet unknown—used to poison arrows, like the *Oronooca ticunas.*

No. 213.—Cycas—

Three species in Materia Medica—

1. *Cycas Circinalis.* Sago Palm.

Cabinet specimen, Jeff. Coll. of the fruit, No. 244—figure of the palm, No. 245.

2. *Cycas Revoluta.*

3. —— *Caffræa.* Meal Bark Tree.

These three palms yield the restorative dietetic of the shops, called Sago—it is made from the pith. Portland island Sago is obtained from No. 88. Parmentier entertained the idea, that all feculæ were identical—he proposed to make Sago out of sweet potatoes. The *couscous* of the African negroes is a sort of Sago, prepared from *holcus spicatus.* Sago resembles Tapioca in qualities, but is more nutritious. That of commerce is chiefly obtained from No. 1, which is called *Landan*, growing in the Moluccas. It is a universal article of food, among the inhabitants of Amboyna, Ceram, Celebes, and Borneo.

No. 214.—Cydoniæ semina. Quince seeds. The fruit of *Pyrus Cydonia*, the Quince tree.

Cabinet specimen, Jeff. Coll. No. 246—figure of the tree, No. 247.

No. 215.—Cynanchum Oleæfolium. Argel or Arguel, a plant native of Egypt, constituting a part of the three plants which yield Senna, which see.

Cabinet specimen, Jeff. Coll. No. 248—figure of the plant, No. 249.

Some native species of *Cynanchum* are, I think, medicinal. They would be good subjects for an inaugural dissertation.

No. 216.—Cytisina. Cytisine.

The proximate principle discovered by MM. Chevallier and Lassaigne, in the seeds of *Cytisus Laburnum*, on which the emetic and purgative property of those seeds depends. It is analogous to *Emeta*.

The seeds yield—1, a greenish fatty matter, soluble in water and alcohol—2, a green colouring matter—3, Cytisina—4, woody fibre—5, albumen—6, malic and phosphatic acids—7, malates of potass and lime.

Qualities. Cytisina is incrystallizable, of a brownish-yellow colour, and bitter nauseous taste; slightly deliquescent; very soluble in water and diluted alcohol; insoluble in ether. The acetate of lead does not render its aqueous solution turbid; the sub-acetate slightly precipitates it. Infusion of galls occasions a yellowish-white, flocculent precipitate, and the alkalies communicate a greenish-yellow tint to it; solution of gelatine does not precipitate it. In doses of 1 grain, Cytisina operates as an emetic and cathartic—a stronger dose produces serious accidents, analogous somewhat to those of Emeta. It has not been employed in medicine—is an excellent subject for an experimental inaugural dissertation.

A bitter nauseous substance, resembling Cytisina, was discovered by the above-named chemists, in the flowers of *arnica montana*—to which principle that plant is supposed to owe its emetic powers.

No. 217.—Chimaphila umbellata. *Pippsissewa.* Winter green.

Cabinet specimen, Jeff. Coll. No. 250—figure of the plant, No. 251.

No. 218.—Chimaphila maculata. Poison *Pippsissewa.*

Cabinet specimen, Jeff. Coll. No. 252—figure of the plant, No. 253.

For detailed account of each, here noticed out of their literal place, by omission, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. I. and Fl. N. Amer. Vol. I.

D.

No. 219.—Daphne Mezereum. Common Mezereum.

Cl. 8. Ord. 1. *Octandria Monogynia.* Nat. ord. *Vepreculæ*, Linn. *Thymelææ*, Juss.

Officinal. *Mezerei cortex.* Lond. *Daphnes Mezerei cortex.* Edin. *Radicis cortex.* Dub. The bark of the root.

Cabinet specimen, Jeff. Coll. No. 254—figure of the plant, No. 255.

A small shrub, native of Britain and the north of Europe—cultivated in our gardens, where it stands the winter—flowers in March and April, before the leaves appear.

Qualities. The fresh liber, or inner bark of every part of the plant, acrid, inflammatory, and vesicating, applied to the skin; chewed, produces heat of the mouth and fauces, which continues for hours. The fruit (red berries) acrid, and a corrosive poison if eaten. Yields its virtues to water and vinegar. Contains Daphnia.

Medical Properties and Uses. Stimulating and powerful diaphoretic, increasing arterial action; apt to disorder the primæ viæ, and occasion vomiting and purging. Used in combination with sarsaparilla, and other articles, in stimulating diet drinks, and all anti-syphilitic syrups and robs. Has been used by the French surgeons, to make and keep open issues. Chewing frequently pieces of the root, has cured difficult deglutition depending on paralysis. The woody fibre is nearly inert. Internally, a decoction has been used for chronic rheumatism, scrofulous swellings, lepra, and generally all obstinate cutaneous diseases.

Dose, in substance, gr. i to grs. x.

The *Daphne laureola* is very generally sold for *Mezereum.*

Offic. Prep. *Decoctum Daphnes Mezerei.* Edin. *Decoctum Sarsaparillæ comp.* **L. & U. S.**

No. 220.—Daphnia. Daphnine.

This is a principle *sui generis*, obtained by Vauquelin from No. 219. He digested the bark in alcohol; then evaporated the liquid, to separate the resin; diluted the residual fluid with water; filtered, and added acetate of lead, by which he obtained a copious red precipitate: he separated the lead from this, by sulphuretted hydrogen gas, and obtained Daphnia.—(See *Annales de Chem.* lxxxix. p. 174.) The medical application, and effects on the animal economy, of Daphnia, would be a novel and good subject for an inaugural thesis.

No. 221.—DATURA STRAMONIUM. Thorn apple—Jamestown weed: vulgarly *Jempson*, a corruption of Jamestown.

Var. *a*—*Tatula*.

Cl. 5. Ord. 1. *Pentandria Monogynia*. Nat. ord. *Solanaceæ*, Linn. *Solaneæ*, Juss.

OFFICINAL. *Datura Stramonii, herba*. Edin. *Stramonium, herba*. Dub. The herbaceous part of the Thorn apple plant. *Datura Stramonium, folia et semina*. U. S. The leaves and seeds of Thorn apple, or Stramonium.

An annual weed, introduced, but every where naturalized, growing abundantly on commons, wastes, road-sides, and about rubbish. There are two varieties—the white, with green caulis and branches; and the purple-flowered, with purple caulis and branches.

QUALITIES. Has a narcotic fetid odour, bitter nauseous taste. Wedenburg found it to contain gum, (or mucus) resin, a volatile matter, which Mr. A. T. Thompson says is carb. of ammonia, and a narcotic alkaline principle, called *Daturia*. Medicinal properties extracted by aqueous and spirituous menstrua.

MEDICAL PROPERTIES AND USES. Narcotic and antispasmodic; used in extract, tincture, and by smoking the roots for asthma. The tincture of the seeds is now preferred to any other preparation.

Dose, of the extract, grs. i to ij, twice a day, increased until grs. xv. in 24 hours—of the tincture of the seeds, from ƒʒss to ƒʒij.

OFFIC. PREP. *Tinct. Stramonii*. U. S. *Extractum Stramonii*. U. S.

No. 222.—DATURIA. Daturine.

Cabinet specimen, Jeff. Coll. No. 256.

The alkaline principle obtained by Brandes from the seeds of No. 221, similar to Atropia and Hyoscyama. Daturia contains the poisonous principle of Stramonium, and should therefore be cautiously prescribed. Brandes has furnished an imperfect account of this substance; and it yet remains to be ascertained, in how far it may be an accession to the list of medicines. An inaugural dissertation on this subject, if carefully executed, after experiments, would give its author much credit. I subjoin Brandes' analysis of the seeds of Stramonium:—

Fixed oil, 13.85.
Thick fatty oil, 0.8.
Fatty buttyraceous body, with resinous chlorophylle, 1.4.

Wax, 1.4.
Resin, insoluble in ether, 9.9.
Yellowish-red extractive matter, 0.6.
Malate of Daturia, 1.
Incrystallizable sugar, with a salt having a base of Daturia, 0.8.
Gummy extractive matter, 6.
Gum, with different salts, 7.9.
Bassorine, with alumina and phosphate of lime, 3.4.
Woody fibre, 22.
Phyteumacolle, 4.55.
Albumen, 1.9.
A matter analogous to Ulmia, called by M. Brandes *glutenoine, 5.5.*
Malate of Daturia, malate and acetate of potass, and malate of lime, 0.6.
A membranaceous secretion containing—Silica, 1.35—water 15.1—loss 1.95.

No. 223.—Daucus Carota. Common carrot.

Officinal. *Dauci* (Hortensis) *Radix*—(Agrestis) *Semina.* Lond. *Dauci Carotæ Radix.* Edin. *Daucis Sylvestris; Semina.* Dub. The root of the cultivated Carrot, and the seeds of the wild Carrot.

Cabinet specimens, Jeff. Coll.—of the seeds, No. 257—figure of the plant, No. 258.

A pentandrous umbelliferous plant, yielding the well-known vegetable under culture, and seeds, which, taken from the wild plant growing by way-sides, are medicinal. The root is used as a poultice. The seeds are diuretic and aromatic. Dose of bruised seeds, ℈j to ʒj, or more.

No. 224.—Decocta. Decoctions.

These are the impregnated solutions of medicines, in which their activity is obtained by coction. They are only to be made of medicines, the virtues of which are soluble in water, not vaporizable, nor existing in extractive matter: the latter would become inert by long boiling. The drugs should be bruised or sliced, completely covered with water, and the vessel closely fitted with a cover; the coction should be slowly, regularly, and uninterruptedly continued for some time. In compound decoctions, those substances should be first put in, which are the hardest and require the longest coction—and so on, successively, with those the virtues of which are most speedily extracted. If volatile substances are to form a part, the decoction, when prepared, should last of all be poured over them, and covered until cold. The proportions must be regulated by the known nature of the ingredients. As a general

rule—of roots, barks, or dried woods, ℥ij to ℥vj, to every pint of water—of herbs, leaves, or flowers, ℥j to ℥iij, to every pint of water. The decoctions should be filtered through linen, (not too fine,) while hot—should be prepared in small quantities at a time. In summer, they soon spoil, and should not be used after 48 hours have expired, unless kept in a very cold place.

The simple officinal decoctions of the pharmacopeias, are—*Decoctum Cinchonæ. D. Althææ officinalis. D. Cydoniæ. D. Digitalis. D. Dulcamaræ. D. Lichensis. D. Papaveris. D. Quercus. D. Sarsaparillæ. D. Veratri. D. Aruliæ nudicaulis. D. Guiaci. D. Hordei. D. Mezerei. D. Scillæ. D. Senegæ. D. Geffroeæ inermis.*

The compound decoctions are—*D. Sarsaparillæ comp. D. Columbæ comp. D. Aloes comp. D. Guiacei comp. D. Hordei comp.*

DECOCTUM LUSITANICUM—Lisbon diet drink.

Formula—

℞ Sarsap. concis.
Rad. Chinæ, āā ℥j.
Nucum Juglandis, cortice siccatarum, No. xx.
Antimonii sulphureti, ℥ij.
Lapidis pumicis pulverisat.
Aquæ distillat. ℔x.

The powdered antimony and pumice-stone are to be tied in separate pieces of rag, and boiled along with the other ingredients. The use of the pumice-stone is merely mechanical—to divide the antimony.

No. 225.—Delphinum. Larkspur.

Three species—1. *Delphinum Stavisagria.*
2. ——— *Consolida.*
3. ——— *Elatum.*

1. DELPHINUM STAVISAGRIA—Stavesacre.

Officinal. *Stavisagriæ semina.* Lond. Dub. *Delphinii Stavisagriæ semina.* Edin. Stavesacre seeds.

Cabinet specimen, Jeff. Coll. No. 259—figure of the plant, No. 260.

Native of the south of Europe. A violent emetic and cathartic—hence rarely used. A salivant masticatory—hence used to cure tooth-ache, by chewing a few seeds. Chiefly employed in powder, mixed with hair-powder, for destroying pediculi of the head.

2. DELPHINUM CONSOLIDA—U. S. Common garden Larkspur. The root.

Cabinet specimen, Jeff. Coll. No. 261.

3. DELPHINUM ELATUM—resembles it—is narcotic.
4. And another species, indigenous, called in Tennessee, *Staggerweed*—is narcotic.

2, 3, 4, would be good subjects for an inaugural thesis—separately considered, or all together as a monograph of this active and deleterious genus.

No. 226.—Delphia. Delphina or Delphinina.

I prefer the first name. *Delphine*, or *Delphinine*.

An alkali, being the proximate principle of the seeds of No. 225. (1.) Discovered, in 1819, by MM. Fenuelle and Lassaigne. Their analysis of stavesacre seeds was as follows:—

1. Volatile oil, a trace.
2. A yellowish fixed oil.
3. A brown bitter principle, not precipitable by the acetate of lead.
4. A yellow bitter principle, not precipitable by the acetate of lead.
5. Malate of Delphia.
6. Incrystallizable sugar.
7. Gum.
8. Woody fibre.
9. Animal matter, insoluble in spirit of wine, precipitable by acetate of lead, and infusion of galls.
10. Albumen.
11. Salts, with a base of potass and lime.

Mr. Brandes' analysis of the same seeds, is as follows:—

1. Fixed oil, very soluble in spirit of wine, 14.4.
2. Fixed oil, sparingly soluble in spirit of wine, 4.7.
3. Fatty matter, analogous to cetine, 1.4.
4. Delphia, 8.1.
5. Gum, with traces of phosphate of lime, and of a vegetable salt with a base of lime, 3.15.
6. Fecula, 2.4.
7. Woody fibre, 17.2.
8. Phyteumacolle, with malate, acetate, sulphate, and hydrochlorate of potass, and a salt with a base of lime, 30.67.
9. Vegetable albumen, 0.5.
10. Concrete albumen, 3.2.
11. Sulphate of lime, with phosphate of magnesia, 3.62.
12. Water, 10.0.
13. Excess, 1.49.

Qualities of Delphia. A white powder, crystalline when moist, opaque on exposure to air; inodorous; first taste bitter—after, acrid. Nearly insoluble in water; alcohol and ether dissolve it. The alcoholic solution turns syrup

of violets green, and restores the blue of turnsole paper reddened by acids. Forms neutral salts, of an acrid and bitter taste, with sulphuric, nitric, hydrochloric, oxalic, acetic, and other acids. Alkalies precipitate it, in form of a white jelly. Orfila found 6 grains to kill a small dog—more speedily fatal, when Delphia is dissolved in acetic acid, in which case it kills the animal in 40 or 50 minutes. Acts on the nervous system. Has not been used in medicine: the salts of the base should be tried. A good subject, with the genus, for an inaugural dissertation.

The same alkali doubtless exists in 2 and 3, of No. 225, and perhaps in other genera of the family *Ranunculaceæ*, to which the genus *Delphinium* belongs.

No. 227.—Diagrydium. Diacrydium.

A mixture of Aleppo Scammony (which is also called by this name) with a mucilage, and then evaporated. It is intended to sheathe the acridity of the Scammony, by this kind of comminglement in the evaporated extract, with a bland substance.

Formula. ℞ Scammony, 1℔, infused for 12 hours in juice of quinces, or mucilage of quince-seeds, and evaporated to dryness.

No. 228.—Dianthus Caryophyllus. Clove pink—Gillyflower—Clove carnation pink.

Officinal. *Dianthi Caryophylli; flores.* Edin. *Caryophyllum rubrum; flores.* Dub. Flowers of Clove pink.

Cabinet specimen, Jeff. Coll. No. 262—figure of the plant, No. 263.

The petals of this beautiful, fragrant, and favourite flower, are aromatic, like clove-spice, somewhat bitter, and subastringent; formerly used in nervous hysteria; may be as good as saffron; now only used to flavour and colour syrups containing active medicines.

Pharm. Prep. *Syrupus Dianthi Caryophylli.* E. D.

No. 229.—Digitalis purpurea. Foxglove—purple Foxglove.

Cl. 14. Ord 2. *Didynamia Angiospermia.* Nat. ord. *Luridæ*, Linn. *Scrophulariæ*, Juss.

Cal. 5-parted. *Cor.* bell-shaped, 5-cleft, ventricose. *Capsule* ovate, 2-celled.

Officinal. *Digitalis folia et semina.* Lond. *Folia.* Dub. *Digitalis purpureæ.* Edin. Foxglove leaves. *Digitalis purpurea, folia.* U. S.

Cabinet specimens, Jeff. Coll. Nos. 264 and 265—figure of the plant, No. 266.

Native of Europe. The leaves should be gathered when the flower is in bloom, and only the fresh ones selected. The powder must be kept in glass-stopper vials, covered with dark paper.

Qualities. The leaves, when carefully preserved, have a slight narcotic odour, a bitter nauseous taste—when reduced to powder, a lively green hue. Contain extractive matter, and a green resin, in both of which the narcotic property resides. Destouches, a French chemist, obtained, on analyzing them, much carbonate of ammonia, by distilling the aqueous extract. He also obtained sulphate of potash and of lime, phosphate of lime, carbonate of lime and of potash, and acetate of ammonia. Water and alcohol extract the virtues—coction injures them.

Medical Properties and Uses. Sedative and diuretic; diminishing the frequency of the pulse, and the general irritability of the system, and increasing the action of the absorbents. Produces slight nausea and languor. Aromatics in combination with it, diminish its diuretic powers. Has considerable influence over the heart and arteries—has been used in palpitations attendant on any irregular action of the heart. May be given—1, in substance—2, in tincture—3, in infusion—the last most diuretic.

Dose, of powdered leaves, gr. i, in a pill, twice a day; increasing ¼ of a grain every second or third day, until some effect be perceived on the kidneys or general frame. It sometimes sickens the stomach, and purges—when it does so, a little opium will correct both. 25 drops of the tincture, given three times a day, in barley water, is said by an English surgeon to have cured gonorrhœa. Has been used in phthisis pulmonalis, as early as 1710. Dr. Baildon observed that posture has an effect in ascertaining its real operation on the system. After taking six grains a day, his pulse fell from 110 to 40; but when actually at 40 in a recumbent position, the erect posture would raise it to 100. When sitting, it was 72—and lying down, 40. He observed the same effects in several patients. Has been used in dropsies, in mania, scrofula, and in most cases of increased vascular action, when we desire to lessen the impetus of blood, as in aneurism. Now much used in inflammatory affections, in catarrhal fever of children, in active hæmorrhages, particularly uterine. Ferriar combined it with myrrh and sulphate of iron, for consumption. Its use has been extended to venereal ulcerations, chronic rheumatism, whooping cough, and other spasmodic affections. Hufeland recommends it externally, to discuss glandular swellings.

Dose, in substance, gr. i, increasing—in tincture, x to xx drops, increasing.

Offic. Prep. *Decoctum Digitalis.* D. *Infusum Digitalis.* L. E. & U. S. *Tinctura Digitalis.* L. E. D. & U. S. *Tinctura Ætherea Digitalis purpureæ,* of the new French Code.

Formulæ—

No. 1. ℞
Scillæ rad. exsiccat. grs. iv
Digitalis foliorum, grs. x
Hydrargyri sub-muriát. grs. vj
Myrrhæ pulv. ℈j
Triturated together—then add—
Assafœtidæ, ʒss
Extract. Gentianæ, q. s.

Made into a mass, and divided into xv pills, one to be taken morning and evening.

No. 2. ℞
Tinct. Digitalis, ♏x—xv
Mist. Camphoræ, fʒx
Tinct. Calumbæ, fʒj

A draught to be taken twice a day, in palpitation of the heart, accompanied with great nervous irritability.

No. 3. ℞
Pulv. foliorum Digitalis,
Pulv. Scillæ, āā gr. i
Hydrargyri sub-mur. gr. ss—gr. i
Potassæ supertartratis, ℈j—ʒss
Syrupi Zingiberis, q. s.

To form a bolus—one night and morning.

No. 230.—Diospyros Virginiana. The Persimon tree.

Officinal. *Cortex.* The bark. U. S.

Cabinet specimens, Jeff. Coll. Nos. 267 and 268—figure of the tree, No. 269.

See Barton's Collections, &c. A good subject for an inaugural thesis.

No. 231.—Dolichos Pruriens. Cowhage.

Officinal. *Pubes leguminis.* U. S. The bristles of the pods.

Cabinet specimen, Jeff. Coll. No. 270.

Native of India, &c. Is the *Cacara pruritus* of Rumphius.

"A strong infusion of the root, sweetened with honey, is given by the Tamool doctors, in cases of cholera morbus. Not used for worms; but is eaten like other beans." *Ainslie.*

A reputed anthelmintic; for tænia; operating, it is alleged, mechanically. Is it worth a thought?

No. 232.—Dortensia Contrayerva.

Officinal. *Contrajervæ radix.* Lond. *Dortensiæ Contrayervæ radix.* Edin. Contrajerva root.

Cabinet specimen, Jeff. Coll. No. 271—figure of the plant, No. 272.

A sudorific tonic. Dose of powdered root, grs. v—3j—seldom used alone.

Offic. Prep. *Pulv. Contrajervæ comp.* L.

No. 233.—Dracontium fœtidum. One of the synonyms of Skunk-cabbage, *Symplocarpus fœtida*, which see.

No. 234.—Drogue Amere.

A French bitter tincture, made of mastic, thus, common resin, myrrh, aloes, and creyat root, (*Justicia paniculata*, which see.) For this last, calumba root is sometimes substituted. Proper proportions of them being taken, the whole are steeped in brandy for a month together, in the sun in dry weather, and then carefully strained and drawn off.

No. 235.—Dryobalanops Camphora. Colebrooke, Asiatic Researches, Vol. XII. p. 539.

Cl. 13. Ord. 1. *Polyandria Monogynia.* Nat. ord. *Guttiferæ*, Juss.

Genus nova. *Cal.* 1-leafed, permanent; enlarged into a gibbous cup, with 5 ligulate, long, scarious wings. *Corol.* 5-petaled. *Caps.* superior, 1-celled, 3-valved; seed solitary. *Embryo* inverse, without perisperm.

Officinal. *Camphora.* Lond. Edin. & U. S. *Camphora; resina.* Dub. Camphor.

Cabinet specimen, Jeff. Coll. No. 273—figure of the tree, No. 274.

This tree grows to a great height, in forests on the north-east coast of Sumatra, and especially in the vicinity of Tampanooly. The greater part of the camphor, as well as camphor oil, found in the Indian bazaars, is not the produce of *Laurus Camphora*, which grows in Japan and China—but is taken to India from Sumatra and Borneo: that of Sumatra is good—but of Borneo, the best in the world. They are both produced by the *Dryobalanops Camphora*, (Colebrooke.) In the eastern countries, the oil is more

esteemed than the concrete: it is obtained by puncturing the tree, when it exudes. To obtain the concrete, the tree is felled, and it is found in flakes near the centre of the tree.

Japan Camphire, China Camphire, or *Camphor*, is obtained from the shoots of the *Laurus Camphora* and *Laurus Cinnamomum*, as also the *Capura Curumder*, by distillation with water; and distinguished, in trade, by the place from which it is imported, into East India and China Camphor.

The *Sumatra Camphor*, or *Borneo Camphire* (that from *Dryobalanops Camphora* of Foster and Colebrooke) is obtained by splitting the tree, the heart of which contains it mixed with essential oil, in lumps the thickness of a man's arm, 12 or 14 inches apart. A middling tree contains 11lb, a large one double that quantity.

South American Camphire, or *Brazil Camphire*, in tears from the Carette.

Liquid Camphor—*Oleum Camphoræ*—is obtained from the same tree as the Sumatra Camphor.

Camphor may be procured from the essential oil of sage, thyme, lavender, rosemary, peppermint, marjoram, Bengalese sage, by distillation. The Cyngalese prepare a kind of it from roots of the Cinnamon tree. According to Correa, the *Shorea robusta* (of Roxb.) yields a superior camphor to that of Japan or China. Camphor is contained in the roots of the *Laurus Cassia—Laurus Sassafras*—in those of galangale, zedoary, and ginger; in cardamom seeds, and long pepper; in the roots of *Calycanthus floridus*, and other species of that indigenous genus—called sweet-scented shrub: the *monanda punctata*, or horse-mint, yields it; and doubtless most of the natural family of *Verticillatæ*, which yield essential oils.

A factitious Camphor may be prepared, by driving a stream of muriatic acid gas through oil of turpentine. This artificial Camphor may be distinguished from the native product, in not being soluble in weak nitric acid, and also in not being precipitated by water from its solution in strong nitric acid.

Qualities. A white brittle substance, unctuous to the touch, but possessing a degree of ductility which makes it refractory under the pestle, unless a few drops of spirit be added. It is capable of becoming crystalline. Odour peculiarly fragrant, penetrating, and almost universally agreeable. Taste bitter, pungent, aromatic. Specific gravity, .9887—it swims, consequently, on water. Very volatile, a warm and moist day carrying off a considerable portion. Readily ignited, burning with a brilliant flame and much smoke. Melts at 288° F. and boils at 400°. It is a

proximate vegetable principle, resembling in many respects the essential oils; only differing in composition from them, in containing more carbon. By distilling it repeatedly with nitric acid, it is converted into camphoric acid, which has peculiar properties, and with alkalies and earths forms camphorates, which are destitute of medicinal virtue. f℥j of water is supposed to hold in a kind of solution about half a grain of camphor, agitated with it—hence camphor tea, as it is called, is moderately endued with the medicinal power of the drug itself. It is soluble in an equal weight of alcohol—it is rendered more soluble by trituration with a little magnesia. Alkalies have no effect on **Camphor.**

Medical Properties and Uses. Anodyne, in certain conditions of the system; in moderate doses, is exhilarating, without raising the pulse; it produces tranquil sleep, and assuages after pains succeeding parturition. The effects are transient, and it must be repeated at short intervals. It is said to correct the bad effects of opium, cantharides, the drastic purgatives, and powerful diuretics. In excessive doses, occasions anxiety, vomiting, syncope, and delirium: these effects are best counteracted by opium. Camphor may be given in substance, (powdered) in mixture, and in tincture. It may be suspended by sugar, yolk of egg, or mucilage of acacia. Dose, grs. iij to ʒj or ʒss—of the tincture, ʒj to ʒij.

Offic. Prep. *Mistura Camphoræ.* L. D. & U. S. *Emulsia Camphorata.* E. *Spiritus Camphoræ.* L. E. D. *Tinctura Camphoræ comp.* L. E. D. *Tinctura Camphoræ.* U. S. *Acidum aceto sum Camphoratum.* E. D. *Linimentum Camphoræ.* L. E. D. *Linimentum Camphoræ comp.* L. E. D. *Linimentum Saponis.* L. E. D. & U. S.

Formulæ—

No. 1. ℞ Extract. hyoscyami, ʒj
Pulv. Camphoræ, grs. viij
Made into 12 pills—3 every night.

No. 2. ℞ Opii puri et
Camphoræ, āā ʒss
Emplast. Lithargyri, ʒij
Sit scuto pectora. *Bree.*

No. 3. ℞ Misturæ Camphoræ, f℥j
Spir. Æther. comp. f℥ss
Tinct. Opii, ♏x
Syrup. Papaveris. f℥j
Make a draught, to be taken going to bed

No. 4. ℞ Moschi, gr. xv
Camphoræ, gr. v
Spir. rectificat. ♏ij
Confect. Rosæ gall. q. s.

First triturate the camphor with the spirit—then make a bolus—antispasmodic.

No. 5. ℞ Camphoræ,
et Pulvis Antimon. āā gr. iij
Opii puri, gr. i
Confect. Aromat. q. s.

Make a bolus, to be taken at bed-time—diaphoretic.

No. 6. ℞ Camphoræ (alcoholæ solutæ) ʒj
Ol. Olivæ, fʒij

Mix for an enema—to be injected at bed-time, every night, for three nights; then, every other night—for ascarides.

No. 236.—DULCAMARA CAULES. L. D. The twigs of woody nightshade—*Solanum Dulcamara*, which see.

E.

No. 237.—ELATERII POMA. L. E. D. Squirting Cucumber—the fruit of *Momordica Elaterium*, which see.

No. 238.—ELATERIUM. The extract of the same—see as preceding.

No. 239.—ELATIN. Clutterbuck's preparation of the same. See as No. 237.

No. 240.—ELETTARIA CARDAMOMUM. One of the synonyms of the plant which produces Cardamom seeds—*Mattonia Cardamomum*, which see.

No. 241.—ELEMI. The resin of No. 46, which see.

No. 242.—EMETA. Emetine. The proximate emetic principle of Ipecacuanha, which see.

No. 243.—Emplastra, of the Colleges. Plasters.

The chief are—

Emplastrum Ammoniaci. E. Ammoniaci cum Hydrargyro E. Assafœtidæ. E. Ceræ. E. Cumini. E. Galbani compositum. E. Hydrargyri. E. Lyttæ or *E. Cantharidis vesicatoriæ. E. Opii. E. Picis compositum. E. Plumbi* (or *E. Oxydi Plumbi semi-vitrici*, or *E. Lythargyri*, or *E. Commune*, or *Diachylon simplex.*) *E. Resinæ. E. Saponis.*

No. 244.—Ergot, or *Secale Cornutum*, which see.

No. 245.—1. Erigeron Philadelphicum, } Scab-
2. ——— Hæterophyllum, } ious.
3. ——— Canadense, Phar. U. S.

Indigenous diuretic plants. For a full account of 1 and 2, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. II.—of 3, see Dr. De Puy, Physico-Med. Trans. New-York, Vol. I.

No. 246.—Eryngium aquaticum. Radix. U. S. Button snake-root.

A good subject for an inaugural dissertation.

No. 247.—Esculia. Esculine.

The alkaline proximate principle of No. 31. Discovered by M. Carzeroni, and obtained by him by a process similar to that for obtaining Cinchonia. It is supposed to contain the febrifuge virtues of the horse-chesnut. Has not been used as a medicine—therefore is a fit subject for an inaugural dissertation.

No. 248.—Eugenia caryophyllata. (Willd.) The Clove tree.

Synonym—Caryophyllus Aromatica.

Officinal. *Caryophylli. Caryophylli oleum.* Lond. *Caryophyllus Aromaticus, Floris germen et ejus oleum volatile.* Edin. *Caryophyllus Aromatica; calyx, oleum essentiale.* Dub. *Eugenia Caryophyllata, gemmæ floris et oleum volatile.* U. S. The flower-buds and volatile oil.

Cabinet specimens, Jeff. Coll. No. 275 and No. 276—figure of the tree, No. 277.

A native of the Moluccas—cultivated in Amboyna, Honimoa, Oma, Noussalant, Isle of France, and Dominica.

Qualities of Cloves well known. Water extracts their odour, but little of their taste—alcohol and ether take up both. Yield, by distillation in water, one-sixth of their weight of a heavy, nearly colourless oil, which becomes yellow by age—it contains the flavour of cloves, but is milder. The

Dutch oil is of a reddish colour, and very pungent and fiery, owing, it is supposed, to the presence of some of the resin of cloves extracted by alcohol. Vauquelin obtained an oil, resembling clove oil, from the leaves of *Agathophyllum ravensara*. The best cloves are frequently mixed, by the Dutch, with those from which they have extracted the oil.

MEDICAL PROPERTIES AND USES. Aromatic, stimulant; given in dyspepsia, attended with sensation of coldness in the stomach; in atonic gout; combined with tonics, in autumnal fevers. The oil is used as a corrigent to griping purgative extracts—as a local application for tooth-ache.

PHARM. PREP. *Infusum Caryophyllorum*. L. *Spir. Lavend. comp*. D.

No. 249.—EUPATORIUM. Hempweed.

Cl. *Syngenesia*. Ord. *Polygamia æqualis*. *Corymbiferæ*, Juss.

Four indigenous species medicinal—

Eupatorium perfoliatum.
——— *maculatum.*
——— *purpureum.*
——— *teucrifolium.*

No. 250.—EUPATORIUM PERFOLIATUM. Boneset.

Cabinet specimen, Jeff. Col. No. 278—figure of the plant, No. 279.

For a full account, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. II. and Ives' edition of Paris's Pharm.

No. 251.—EUPATORIUM MACULATUM. Spotted-stemmed Eupatorium.

See W. P. C. Barton's Flora of North America, Vol. III. plate 103.

Cabinet specimen, Jeff. Coll. No. 280—figure of the plant, No. 281.

No. 252.—EUPATORIUM PURPUREUM. Radix. Phar. U. S. Gravel root.

No. 253.—EUPATORIUM TEUCRIFOLIUM. Wild horehound——Germander-leaved Eupatorium. Herba.

See Ives' edition of Paris's Pharm. and W. P. C. Barton's Comp. Fl. Ph. Vol. II. under that name.

The whole of this extensive genus is, I think, well worth investigation. There are 14 species growing within a few

miles of Philadelphia, and nearly 70 species in the United States. Any two or three of them together, would form a good subject for an experimental inaugural dissertation.

A species of *Eupatorium* (*Satureiæfolium, Lamark*) is said by Mutis and Humboldt, to be considered as a powerful counterpoison to the bite of serpents in the United States. *Virey's Hist. Nat. of Medicine.*

No. 254.—Euphorbia officinarum. Officinal Euphorbium plant.

Officinal. *Euphorbiæ gummi-resina.* L. Euphorbium.

Cabinet specimen, Jeff. Coll. No. 282—figure of the plant, No. 283.

Most violently cathartic and emetic, also errhine and rubifacient—on account of the violence of its action, not now used. It is rare in the shops—the Cabinet specimen I obtained with difficulty. Though this is the plant which yields the chief part of the Euphorbium of Materia Medica, others also yield some portion—viz. *Euphorbia Antiquorum* and *Euphorbia Canariensis* (of Willd.) The whole genus contains an acrid *succus proprius*, of a white colour, which, concreted, is the Euphorbium. The juice of *Euphorbia heptagona* is used to poison arrows. The *Euphorbia triucalli* is cathartic, emetic; the exhalations affect the eyes. This, and the *Euphorbia pillulifera*, are supposed to be anti-syphilitic. The indigenous species of the genus, which are medicinal, are the following Nos. 255—256.

Formula— ℞ Emplast. Picis comp. ℥iv
Euphorbiæ gum-resinæ, ℥ss
Terebinth. vulgar. q. s.

A stimulating application, celebrated by Cheselden and others, to relieve diseases of the hip joint, and to keep up inflammation of the skin, in chronic states of visceral inflammation.

Caution—In pulverizing the Euphorbia, the dispenser should previously moisten it with vinegar, to prevent its rising and excoriating his face.

No. 255.—Euphorbia Ipecacuanha. American Ipecacuanha.

Officinal. *Radix, Ipecacuanha Spurge.* U. S.

Emetic. For a detailed account, see W. P. C. Barton's Veg Mat. Med. U. S. Vol. II.—Bigelow's Med. Bot.—Ives' ed. Paris's Pharm.

Cabinet specimens, Jeff. Coll. Nos. 284 and 285—figure of the plant, No. 286.

No. 256.—Euphorbia Corollata. Large flowering spurge. Radix. Phar. U. S. The root.

Cabinet specimen, Jeff. Coll. No. 287—figure of the plant, No. 288.

See Bigelow's Med. Bot.—Ives' ed. Paris's Pharm.—W. P. C. Barton's Comp. Fl. Phil. under that name.

No. 257.—Extracta. Extracts, of the different Colleges.

Preparations obtained by evaporating watery or spirituous solutions of vegetables, and the native juices obtained from fresh plants by expression, to masses of tenacious consistence. The London College at least, includes the last mentioned, called also *inspissated juices*, under the generic title above. The Dublin College has preserved the distinction of watery or simple extracts, spirituous or resinous extracts, and inspissated juices. I prefer the generalizing term of the London College, for the whole; but perhaps, for the tyro, it may be more convenient and useful to preserve the subdivisions. Therefore, I shall enumerate these preparations thus—

I. **WATERY or SIMPLE EXTRACTS—Mucilaginous extracts of Rouelle.**

Extractum Aloes purificatum—dose, grs. x to xv.

Formulæ—

No. 1. ℞ Opii puri, gr. ij
Extract. Aloes spicat. grs. x

Made into 3 pills—one at bed-time. Narcotic purgative.

No. 2. ℞ Opii puri, gr. i
Extract. Aloes spicat. gr. iij
Extract. Gentianæ, gr. v

Made into 2 pills—to be taken as a dose. Narcotic purgative.

No. 3. ℞ Ferri Ammoniati, ʒj
Extract. Gentianæ et
Extract. Aloes, āā ʒss

Divide into 30 pills, of which 1 or 2 may be taken twice a day. Tonic and purgative.

Extractum Anthemidis. E. Cinchonæ—dose, grs. x to ʒss. *E. Colocynthidis*—dose, grs. v to grs. x—soon becomes hard and mouldy. *E. Gentianæ.*

Formulæ— No. 1. (See No. 3, above.)

No. 2. ℞ Aluminis contriti, grs. v
Myristicæ nucl. contrit. grs. v
Extract. Gentianæ, q. s.
Make into 2 pills—one or both a dose. Astringent.

It also enters into many formulæ, as a vehicle for metallic preparations.

Extractum Hæmatoxyli—dose, grs. x to ʒss.
——— *Humuli*—dose, grs. v to ℈j—(not very useful.)
——— *Opii*—dose, gr. i to grs. v.
——— *Papaveris*—a weak opium—dose, grs. ij to ℈j.
——— *Sarsaparillæ*—good for nothing.
——— *Stramonii*—dose, gr. ¼ to grs. ij, daily; and increased.
——— *Taraxaci*—dose, grs. v to ʒj, in combination with sulphate of potass.

II. SPIRITUOUS or RESINOUS EXTRACTS.

Extractum Cinchonæ Resinosum—dose, grs. x to xxx.
——— *Colocynthidis compositum*—dose, grs. vi to ʒss.

Formulæ—

No. 1. ℞ Extract. Colocynth. comp. ʒj
Opii puri, grs. iij
Olei nucis moschat. ♏ iv
Make into 12 pills, of which 2 may be taken every hour, until they purge freely.

No. 2. ℞ Extract. Colocynth. comp. grs. xxiv
Pil. Aloes cum Myrrha, ʒj
Hydrarg. sub-muriat. grs. xv
Make into 20 pills, of which 1 or 2 may be taken *pro re nata*. Cathartic.

No. 3. ℞ Hydrarg. sub-muriat. grs. x
Pil. Cambogiæ comp. et
Extract. Colocynth. comp. āā grs. xv
Syrupi Zingiberis, q. s.
Make into 12 pills, of which 2 may be taken going to bed, or early in the morning. Cathartic.

Extractum Jalapæ—liable to gripe, unless made with sugar almonds or mucilage into an emulsion—dose, grs. x to ℈j.
Extractum Rhei—not very useful alone—dose, grs. x to ʒss

Formula—

℞ Aloes spicat. ℈j
Scammoniæ, grs. xij
Extract. Rhei, ℈ij
Bacc. Capsici pulv. grs. vi
Olei Caryophyll. ♏ v
Make into 16 pills, of which 2 may be taken going to bed, *pro re nata*. Cathartic.

III. INSPISSATED JUICES.

Obtained by expressing the juices of fresh culled plants, and evaporating them in a water-bath.

Succus Spissatus (*extractum*) *Aconiti*. Dose, beginning with gr. $\frac{1}{2}$, increased. Not much used in U. S.

Formula— ℞ Extract. Aconiti,
Antimonii sulphureti,
Præcipitati, āā gr. i
Magnesiæ Carbonatis, ʒss

Make a powder by trituration. Diaphoretic.

Succus Spissatus (*extractum*) *Belladonnæ*. Dose, gr. i, gradually increased to grs. v, in form of pill.

Succus Spissatus (*extractum*) *Conii*. Dose, grs. v to ʒj, or more, twice or thrice a day.

Formula No. 1—see No. 183, formula 3.

No. 2. ℞ Extract. Conii, ʒj
Folior. Conii exsiccatorum
et in pulverem tritorum, q. s.

Make into pills, each containing 2 grains; Stoerck's narcotic—1 pill a dose.

No. 3. ℞ Opii puri, grs. iv
Extract. Hyoscyam. et
——— Conii, āā gr. xv

Make into 6 pills—1 a dose at night. Narcotic.

No. 4. ℞ Extract. Conii, et
——— Hyoscyam. (*in vacuo*, pp.) āā gr. iij

Make into a pill, to be taken once or twice a day.

No. 5. ℞ Plumbi super-acetatis, gr. iij
Opii puri, gr. i
Extract. Conii, grs. x

Make into 3 pills, of which 1 or 2 daily may be taken. Astringent.

Succus Spissatus (*extractum*) *Elaterii*. Extract of Elaterium, of the Colleges, has now properly given way, in this country, to Clutterbuck's Elatin—see *Momordica Elaterium*.

Succus Spissatus (*extractum*) *Hyoscyami*. Dose, grs. v to ʒj, in pills.

Formulæ—

No. 1. ℞ Extract. Hyoscyami, ʒj
Camphoræ (alcoholis opii
in pulv. redact.) gr. viij

Make into 12 pills, of which three may be taken every night. Narcotic.

No. 2. ℞ Tinct. Scillæ, ♏x
Acid. Nitric. dilut. ♏vj
Extract. Hyoscyami, grs. iij
Aquæ puræ, fʒiss

Make a draught, to be taken every third hour
Expectorant.

See also formulæ Nos. 3 and 4, under *Succus Spissatus Conii*, above—formula No. 3, of No. 183.

Succus Spissatus (*extractum*) *Lactucæ Sativæ*—this is *Lactucarium*, which see.

No. 258.—Ferrum. Iron.

The filings and oxydated scales of the smith's shop were formerly used; but the salts only are now employed in medicine. The filings are called, officinally,

Ferri ramenta et fila. Lond. *Filia et Limatura*. Edin. *Ferri scobs*. Dub. Iron filings and wire. *Ferrum, squamæ oxidi*. Dub. The scales of the oxide of iron. Among the few wise things done by the framers of the Phar. U. S. is their omission of these absurd preparations, in their list of medicines—the very idea of taking which would be shocking to most patients. Let them remain in the Dispensatories, for their proper pharmaceutical preparations; and for this purpose, they are mentioned in their proper place, in the Phar. U. S. I call your attention to the salts, which are important medicines.

Cabinet specimens, Jeff. Coll. Nos. 289, 290, and 291.

Offic. Prep. *Ferri Limatura purificata*. E. *Oxidum Ferri nigrum purificatum*. E. D. *Ferri acetas*. D. & U. S. *Subcarbonas Ferri præparatus*. E. D. *Ferri carbonas præparatus*. U. S. *Carbonas Ferri præcipitatus*. E. D. & U. S. *Ferri sulphas*. L. E. D. & U. S. *Ferrum tartarizatum*. L. E. *Ferri tartras*. U. S. *Tinctura acetatis Ferri*. D. & U. S. *Liquor Ferri alkalini*. L. & U. S. *Vinum Ferri*. L. D. & U. S. *Murias Ammoniæ et Ferri*. E. & U. S. *Sulphuretum Ferri*. E. *Rubrum Ferri Oxidum*. E. *Ferri prussias*. U. S. *Ferri Phosphas*. U. S. *Sulphas Ferri exsiccatus*. Edin. *Tinctura Ferri Ammoniati*. Lond. *Tinct. Ferri Muriatis*. Lond. *Tinctura Ferri cum Oxido rubro*. Dub.

No. 259.—Ferri sub-carbonas. L. *Carbonas Ferri præcipitatus*. E. *Ferri Carbonas præcipitatus*. U. S. *Carbonas Ferri*. D. Carbonate of iron—precipitated carbonate of iron.

Cabinet specimen, Jeff. Coll. No. 292.

Qualities. A chocolate-brown, or, occasionally, a Scotch-snuff-brown powder, without odour, of a slightly styptic taste—according to Mr. Philips, varies according to the

temperature at which it is prepared, as well as from differences in manipulation—consists of mixtures of peroxide, protoxide, and sub-carbonate of protoxide of iron, in various proportions. Insoluble in water; soluble in acids, with effervescence.

MEDICAL PROPERTIES AND USES. Tonic—may be given in powder, or pills, with an aromatic, dose, grs. v. to grs. XXX. Mr. Hutchinson, of Southwell, has found it efficacious in *tic doloreux*.

Formulæ—

No. 1. ℞ Ferri carbonatis præcip. grs. v—x
P. Valerianæ, ℥ss
Syrupi Zingiberis, q. s.
Make a bolus—tonic.

No. 2. ℞ Ferri carbonatis præcip.
Extract Conii, āā ʒj
Made into 24 pills—2 to be taken twice a day, in fluor albus, and scrofula.

No. 260.—FERRI SUB-CARBONAS PRÆPARATUS. E. *Ferri Carbonas præparatus*. U. S. Prepared rust of iron—formerly Rubigo Ferri of Dub.

Cabinet specimen, Jeff. Coll. No. 293.

This preparation differs but little from No. 259, except that it is less easily borne by the stomach. I think it a sub-carbonate, and not a carbonate; for which reason, I adopt the Edinburgh nomenclature, in preference to that of the U. S.

QUALITIES. Inodorous, of a reddish brown colour, and styptic taste—soluble in acids, with effervescence, and is, like No. 259, decomposed by heat.

Tonic; has been used in *tic doloreux;* as an internal and external application to cancer. Said to be emmenagogue—so it is, but by its simple tonic effect—used in fluor albus, where there is no febrile action—should be combined with aromatics, of which ginger is the best.

Dose, as in No. 259, and increased to ℥ss—℥j and ʒss doses; may be given as largely as the stomach will bear—to correct its purging effect, which sometimes occurs, opium should be added. With the preceding, is one of the best tonics for the neuroses.

Formula—

℞ Rubigo ferri, (sub-carb. F. p.) ℥ij
P. Zingiberis, ʒij
Tinct. Thebaicæ, (Tr. opii.) gtt. XXX
Mixed by trituration, and divided into twelve powders—one every two hours, in syrup, or molasses.

This is the formula of the late Dr. Rush, for making what were called in his time, Rush's tonic powders. He prescribed them almost daily, to the patients of the Pennsylvania Hospital, when I was resident physician there; and they were daily made up in his shop, (for there were no doctors' *offices* then,) by his pupils, for private patients.

No. 261.—Ferri sulphas. L. & U. S. *Sulphas Ferri.* E. D. (*Ferrum Vitriolatum.* P. L. 1787. *Sal Martis.* P. L. 1745. *Sal seu Vitriolatum Martis.* P. L. 1720.) Sulphate of iron, (formerly Green Vitriol.)

Cabinet specimen, Jeff. Coll. No. 294.

Qualities. Beautiful apple-green, rhomboidal prisms, efflorescing, on exposure to air, and becoming covered with a yellow powder, owing to their attraction of oxygen; heating them, produces watery fusion—if by exalted temperature, the acid is driven off, and a peroxide of iron remains, which is known in commerce, by the name of *Colcothar*. (Cabinet specimen, Jeff. Coll. No. 295,) According to Dr. Thompson, the sulphate of iron consists of 27.7 parts sulp. acid, 28.3 protoxide of iron, 45 water—8 parts of which exist in combination with the oxide of iron. Soluble in 2 parts of water, at 60° F. and three-fourths at 212°—the solution reddens vegetable blues—insoluble in alcohol, until the iron be farther oxidized.

Medical Properties and Uses. Tonic, astringent—said to be emmenagogue and anthelmintic—if so, it is by its tonic power. Gripes, in large doses. Dose, gr. i to grs. v combined with rhubarb, or some bitter extract. The aromatic lozenges of steel, consist of this salt, with a small proportion of tinct. of cantharides.

Offic. Prep. *Mistura ferri comp.* L. *Pil. ferri comp.* L. *Sulphas ferri exsiccatus.* E. L. D.

Formulæ—

No. 1. ℞

Magnesiæ sulphatis, et	
Sodæ sulphatis,	āā ℥ss
Ferri sulphatis,	grs. v
Misturæ Camphoræ,	f℥viiss

Make a mixture—of which 2 table-spoonfuls are to be taken twice a day. Cathartic for debilitated persons, or for worms.

No. 2. ℞

Sodæ Carbonatis,	℥ij
Ferri sulphatis,	grs. iij
Magnesiæ sub-carb.	℥j
Aquæ puræ,	℥ss
Acidi sulphurici dilut.	f℥x

The water is first to be put in a flask—the salts then added, and then the sulphuric acid—the vessel is to be put away in a cold place. Decompositions of the salts of iron, of soda, and magnesia, take place in this preparation—the acid should not be in excess, else the salt of iron would not undergo the necessary decomposition. (Paris.)

No. 3. ℞ Ferri Sulphatis,
Potassæ sub-carbonatis, āā ʒss
Myrrhæ, ℈ij
Rubbed together, and add
Extract. Gentianæ, q. s.

Make 24 pills. *Maclean*—in Dropsies.

No. 262.—Ferrum ammoniatum. L. *Murias ammoniæ et ferri.* E. D. (*Ferrum ammoniacale.* P. L. 1737. *Flores Martiales.* P. L. 1745. *Ens Veneris.* P. L. 1720.)

Cabinet specimen, Jeff. Coll. No. 296.

Qualities. In crystalline orange-yellow grains, which deliquesce; smell like saffron—taste styptic—a beautiful salt, varying according to the degree of heat employed in its preparation—a mixed mass, consisting of sub-muriate of ammonia, and sub-muriate of iron, the metal being in a state of red oxide. According to Mr. Philips, the salt prepared by direction of the London College, necessarily contains a portion of sub-carb. of ammonia—fʒj water dissolves ʒiv of the salt—very soluble in alcohol.

Medical Properties and Uses. Tonic and aperient—reputed emmenagogue; if so, it is by the properties just noticed—was formerly much used in epilepsy, scrofula, hysteria, chlorosis, and rickets; but being uncertain in its effects, disusage has been the result. Dose, grs. iij to grs xv twice or thrice a day. Is impure, when of a pale-yellow colour; in which case, it must be re-sublimed.

Offic. Prep. *Tinctura ferri ammoniati.* L.

Formulæ—

No. 1. ℞ Ferri ammoniati, ʒj
Extract. Gentianæ et
Extract. Aloe, āā ʒss

Triturated together, and divided into 30 pills, of which 2, a dose, three times a day. Tonic and purgative.

No. 2. ℞ Ferri ammoniati, gr. v
Rhei Radicis contrit. grs. iij

Make a powder, which may be taken daily, in any convenient vehicle. Tonic.

No. 3. ℞ Myrrhæ pulv. ℈j
Ferri ammoniati, grs. vj
Triturated together,
and add
Syrupi Zingiberis, q. s.

Make an electuary, of which a portion, the size of a nutmeg, may be taken twice daily.

No. 263.—Ferrum tartarizatum. L. & U. S. *Tartras Potassæ et Ferri.* E. *Tartarum ferri.* D.

Cabinet specimen, Jeff. Coll. No. 297.

Qualities. A brownish-green, inodorous powder, of slightly styptic taste, attracting moisture from the air, but not deliquescing. According to Mr. Philips, it is, as frequently prepared, a mere mixture of metallic iron, with cream of tartar, coloured by oxide of iron; but carefully made, is either a triple salt, or one of those combinations which crem. tart. forms with metals. Soluble readily in water—not undergoing any decomposition for a length of time, except depositing tartrate of lime, which is an accidental impurity in the cream of tartar.

Medical Properties and Uses. A diuretic tonic. Dose, grs. x to ʒss—should be used in solution, because of the tendency of the salt to a semi-deliquescence, when prescribed in powders; suitable, from its mildness, to the diseases of children—sits easily on the stomach—a remedy in dropsy.

Formulæ—

No. 1. ℞ Ferri tartarizati, grs. x
Pulv. Calumbæ, gr. xv

Make a powder—to be taken twice a day.

No. 2. ℞ Potassæ super-tartratis, ʒij
Ferri tartarizati, ʒiij
Zingib. ℈j
Sirupi simp. q. s.

Dose, ʒij—three times a day. Cathartic.

No. 264.—Ferri phosphas. U. S. Phosphate of Iron.

Cabinet specimen, Jeff. Coll. No. 298.

For mode of preparation, see Phar. U. S. There are two preparations, the yellow and the blue. Recommended in dyspepsia, amenorrhœa, cutaneous diseases, chronic rheumatism; and by Carmichael, for scrofulous and cancerous ulcerations. Tonic. Dose of blue phosp. grs x to ℈j.

No. 265.—Ferri Prussias. U.S. Prussiate of Iron —the pigment, Prussian blue.

Cabinet specimen, Jeff. Coll. No. 299.

This salt is introduced into the Phar. U. S. because much used by American practitioners. The late Dr. Samuel Powell Griffitts used it extensively as a febrifuge tonic. Dr. Zollikoffer, of Baltimore, commends it in intermittents.—May be given during the paroxysms—in the apyrexia, indiscriminately. Dr. Worthington, of Washington, has used it in uterine hæmorrhage, which it checks, while it assuages the irritation on which it may depend. His dose is ℈j. As a febrifuge tonic, the dose is, grs. v to x, twice a day. By the recommendation of the late Dr. Griffith, I used it repeatedly in the fever of 1823 and 1824, prevailing in this city and neighbourhood, and can attest to the efficacy of its tonic febrifuge powers. I cured many cases by a mercurial purge, this salt, and centaury drink freely. I gave the prussiate in 10 grain doses three times a day, and often every two hours. It is an American practice, deserving of further trials, and would be a good subject for a practical inaugural dissertation, by which, if judiciously managed, the author would obtain credit and reputation. I know nothing of its use in uterine hæmorrhage. I am of opinion that the phosphatic salts are all too much neglected.

Penn'a. Med. Colleges
Reading Room.

No. 266.—Ferula Assafœtida. Assafœtida plant.

Cl. 5. Ord. 2. *Pentandria Digynia.* Nat. Ord. *Umbellatæ.*

Officinal. *Assafœtida gummi resina.* Lond. Edin. & U. S. *Assafœtida.* Dub.

Cabinet specimen, Jeff. Coll. No. 300—figure of the plant, No. 301.

Native of the south of Persia, growing on the mountains, in the provinces of Chorasaan and Laar, where it is named *kingisch.* Kempfer has described it in the *Amanitates exoticæ*, 535, with a figure 536. Stem nine feet high. Seeds have a porraceous odour, and a sharp bitter taste. The drug is obtained from the roots when 4 years old, by twisting the stems off at the corona, when the plant has begun to decay, removing the earth from the upper portion of the root, and cutting it transversely. After 48 hours, the juice, which has flowed spontaneously in the sun, is scraped off, and another transverse incision made. This is repeated 3 successive times, when the root is allowed to remain untouched for 8 or 10 days, at which time another excision is made. After this, the root perishes. The juice, collected from a number of roots, is put together, and dried in the sun; it is then the drug of commerce.

Qualities. Irregular masses adhering together, containing many little shining tears, of a whitish, reddish, or violet hue. Taste sub-acrid, bitter; odour fetid and alliaceous: the latter impaired by age. Consists of gum (or Brugnatelli says, extractive) 60 parts, resin 30, essential oil 10. Yields all its virtues to alchohol and ether. Triturated with water, forms a milky mixture, called *lac assafœtidæ*. It is not permanently held in solution, unless yolk of egg or mucilage be used as an intermediate reconciling ingredient. ℥j of the drug, requires one yolk, and double its weight of mucilage. If ℥vj assafœtida be triturated with ℥ss of camphor, a mass is formed of the consistence of a plaster, which may be reduced to powder by triturating it with carb. of ammonia, without undergoing any other change.

Medical Properties and Uses. Antispasmodic and aperient, said to be expectorant, emmenagogue, and anthelmintic; was anciently used as a condiment, under the name of σιλφιον, (Laserpitium, Pliny) and Kempfer says the Persians use it in the same way. The term assafœtida, is derived from the Monks of the Salernian School, and writers of the middle ages call it *Opium Cyrenaicum*, i. e. juice from Cyrene. The native practitioners of India deem it too stimulating for pregnant women, thinking it will produce abortion! Used in coughs with pulmonary weakness and tendency to spasm, in flatulent colic, in form of enema; in all hysterial cases, and in *mania a potu*. **Dose, grs. v. to ʒj.**

Offic. Prep. *Mistura Assafœtidæ.* L. D. *Tinctura Assafœtidæ.* L. E. D. *Spir. Ammoniæ fœtid.* L. E. D. *Tinctura Castorei comp.* E. *Pil. Aloes cum Assafœtid.* E. *Pil. Galbani. comp.* E. *Enema Fœtid.* D.

Formulæ—

No. 1. ℞ Assafœtidæ, ℥j
Aquæ Menthæ pip. f℥iss
Triturate the gum with the mint-water, by gradually adding it until well mixed—then add
Tincturæ Valerianæ Ammon. f℥ij
Tincturæ Castorei, f℥iij
Ætheris Sulphurici, f℥j
Make a mixture, of which one table-spoonful is the dose every second hour. An anti-hysteric mixture.

No. 2. ℞ Assafœtidæ, ℥ij
Decoct. Avenæ, t ℥x
Mix for an enema, in flatulent colic, (Bang.) I have used it in tympanitis with success.

No. 3. ℞ Camphoræ (alcohole pulv.) ℥ss
Assafœtidæ, ℥iss
Mucilag. Acaciæ, q. s.

Make pills of 3 grains each—3 to be taken every 3 hours, in dyspnœa and asthma. *Hartmann.*

No. 4. ℞ Assafœtidæ, ℥j
Pulveris Zingiberis, ℥j
Syrupi simplicis, q. s.

Make 30 pills, of which 3 every third hour, in palsy.

No. 5. ℞ Tincturæ Assafœtidæ, f℥j
Tincturæ Opii, f℥iij—f℥iss
Ætheris sulphurici comp. f℥iij
Spiriti Lavendulæ comp. f℥j
Aquæ, f℥iv

Mixed. Dose, a table-spoonful every second hour, *until sleep and tranquillity be induced.* This is a prescription I have for a long time used, with much success, in *mania a potu.* I have occasionally found it necessary to increase the quantity of laudanum, great as it is; and in some cases, found it answer an excellent purpose, to substitute paregoric f℥ij, instead of the laudanum—when I give this, I interdict ardent spirits and malt liquor, and use the decoction of quassia as a drink.

No. 267.—Ficus carica. The *fig-tree.* See No. 141.

The acrid lactiferous juice has been used as an irritant, in the treatment of lepra.

No. 268.—Filicis Radix. L. E. D. Root of the male fern—root of *Aspidium filix mas*—a synonym of *Polypodium filix mas.*

Cabinet specimen, Jeff. Coll. No. 302—figure of the fern, No. 303.

A reputed anthelmintic for tænia. The cabinet specimens are from Switzerland. Inodorous, slightly bitter, subastringent, and mucilaginous. Dose, ℥j to ℥ij, followed by a cathartic—the point on which its anthelmintic power turns.

No. 269.—Flores Zinci. Flowers of Zinc, which see.

No. 270.—Flores Benzoici. Flowers of Benzoin.

Benzoic acid. See *Styrax Benzoin.*

No. 271.—Flores Sulphuris. Flowers of sulphur.

Sublimed from Sulphur, which see.

No. 272.—Folia Indica, or Malabathra.

Names in commerce designating the narrow-pointed elliptical leaves of the *Laurus Cassia*, as well as the oblong, ovate, shining leaves of the cinnamon tree. Dried and powdered, they are prescribed by the native doctors in cases requiring stimulants and cordials.

According to Dr. F. Hamilton, the leaves of the *Laurus Japonica* (of Rumphius) are sold in Nepaul, under the name of *tej-pàt*, by which also the Folia Indica are known to the Hindoos. The Nepaul leaves are, in taste and smell, aromatic, but differ from the *tej-pàt* widely.

Cassia Buds (of *Laurus Cassia*)—a stomachic infusion—is prepared in India from the cassia buds, by the Mahometan doctors, with whom it is a favourite remedy. The buds are dark-brown, shaped somewhat like a nail with a round head, surrounded by the hexangular calyx, which gradually terminates in a point.

No. 273.—Frasera Walteri. American Calumba —Marietta Calumba.

Officinal. *Fraseri Walteri; radix.* U. S. The root of the American Calumba.

Cabinet specimens, Jeff. Coll. No. 304 and No. 305—figure of the plant, No. 306.

For a detailed account, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. II.

Dr. Chapman, in noticing this plant, in a note to his article on Calumba, has confounded the botanical history of the plant yielding the foreign Calumba, with the Frasera—throwing out the suggestion, that the former is, "most probably, a species of Frasera." The fact is, the genus Frasera is exclusively an American genus; and was named in honour of John Henry Fraser, a botanist, who has introduced into England many of our plants, and cultivated them there. The specific name, is in honour of Walter, who wrote a small Flora of Carolina. There is no other species; and the *menispermum palmatus*, which, to a certainty yields the foreign Calumba, is no way allied to the American genus. Neither are any of the plants supposed (during the uncertainty of the botanical history of Calumba,) to produce that root, in any manner allied to Frasera.

No. 274.—Fraxinus Ornus. The flowering Ash.

Cl. 23. Ord. 2. *Polygamia Diœcia.* Nat. ord. *Sepiariæ*, Linn. *Jasmineæ*, Juss.

Officinal. Manna of all the Colleges.

Cabinet specimens, Jeff. Coll. Nos. 307 and 308—figure of the plant, No. 309.

This tree is a native of the south of Europe, growing abundantly in Calabria, Sicily, Apulia, and on the loftier mountains of Greece—is cultivated in England, as an ornamental tree. Two other species—*Fraxinus rotundifolia*, and *Fraxinus excelsior*, also produce manna. It is also produced from the *Tamariscus Africana*, or *Tamarisk*, and used as food by the Bedouin Arabs, in the region of Mount Sinai. Burkhardt says, "whenever the rains have been plentiful during winter, it drops abundantly. They gather it before sunrise, because, if left in the sun, it melts; they use it as we do sugar—principally in their dishes composed of flour." (*Travels in Nubia.*) Many other vegetables produce manna, which is nothing more than a purgative sugar. Manna exudes from the Fraxinus ornus spontaneously; from the stems and branches, in warm dry weather. Most of what is found in commerce, however, is obtained by incisions, on one side of the tree only in the same season, from the trunk upwards, as far as the branches, at the distance of an inch asunder. The different sorts are called Flake manna, Sicilian manna, Calabrian manna—the best is in oblong stalactile flakes (*manna cannulata,*) moderately dry, light, of a whitish or pale-yellow hue, and in some degree transparent. The inferior kinds, called false manna, are soft, unctuous, and brown.

Qualities. Flakes, of a granular texture—odour slight, but peculiar—taste rather mawkish-sweet, with a little bitterness—contains besides sugar, mucilage and extractive, to which its taste and other properties are owing. Entirely soluble in water and alcohol.

Medical Properties and Uses. Laxative—generally used for children and weakly persons, and to augment the efficacy of senna. It may be combined with castor oil, by means of mucilage, and thus forms an excellent infantile cathartic. Dose for children, from ℥j to ℥iij in warm milk. Combined with senna for adults, ℥ss to ℥j senna, and half pint boiling water—a couple of table-spoonfuls every half hour.

Offic. Prep. *Confectio Cassiæ.* L. E. D. *Enema Cathart.* D. *Enema fœtid.* D. *Syrupus Sennæ.* D.

No. 275.—Fucus. Sea-wrack—sea-weed.

GENUS FUCUS.—Many species.

Cryptogamia Class—

Order 1. *Algæ*—Sea-weeds. Approach to animal nature, by containing much nitrogen; none of them are poisonous. On incineration yield kelp; the mother waters, as they are termed, of kelp, contain iodine.—The following species of Fucus yield kelp, and consequently iodine :—

1. *Fucus Saccharinus.* Sweet Fucus. Washed in warm water and hung up, a saccharine substance exudes from it; some eat it without washing.
2. *Fucus digitatus.* Sea-girdle, and hangers. Contain a nutritive jelly, more or less saccharine, eaten by man and beast.
3. *Fucus serratus.* Used with No. 4, to make the vegetable Æthiops of the shops, by burning to a charcoal.
4. *Fucus vesiculosus.* Also called, *Quercus marina,* or Sea-oak. Bladder-wrack; used as No. 3.
5. *Fucus siliquosus.*
6. *Fucus filum.*
7. *Fucus nodosus.*
8. *Fucus palmatus.* Dulse. Dills. Dulesh. Eaten either raw or boiled, or dried; but is very tough. Much esteemed in Ireland, with No. 9, which is often confounded with it.
9. *Fucus edulis.* Red Dulse. Eaten while raw, also after being pinched with hot irons, in which case it tastes like roasted oysters. A red-lake pigment is prepared from it.
10. *Fucus rubens.*
11. *Fucus cartilagineus.*
12. *Fucus membranaceus.*
13. *Fucus filamentosus.*
14. *Fucus esculentus*
15. *Fucus teres*
16. *Fucus fimbriatus*

} Daberlocks; eaten in Scotland.

17. *Fucus pinnatifidus.* Pepper-Dulse. Biting aromatic taste; eaten as a salad.
18. *Fucus nutans,*
19. *Fucus baccíferus,*

} Gulph weed. Eaten raw as a sallad; also pickled as samphire; it is aperient, diuretic; and antiscorbutic.

Iodine is obtained also from the kelp of the following sea plants of the genus *Ulva,* belonging also to order 1st Algæ, viz.

1. *Ulva pavonia.*

2. *Ulva umbilicalis.* Shield Laver. Esculent, but requires baking for some hours, to render it eatable.
3. *Ulva linza.*
4. *Ulva latissima.* Iceland sea-grass.
5. *Ulva lactuca.* Called also *Lichen marinus;*—Oyster-green; attached to salt water oysters. Refrigerant; also nutritive.

Iodine has also been obtained by Dr. Fyfe, and Mr. Straub, of Hofwyl, from the sea-plant we call sponge, or *Spongia officinalis.* Burnt sponge had long been efficiently employed in goitre and other similar glandular enlargements, before the discovery of iodine. It does not yield it largely; probably contains other principles besides.

Iodine is a simple body, discovered in 1813, by Mons. Courtois, in the mother water of soda, as obtained from the different plants enumerated. The name is derived from the Greek word ιωδης, on account of the blue or violet colour of its vapour.

Cabinet specimen, Jeff. Coll. No. 310.

Medical Properties and Uses. Is solid at the ordinary temperature, in the form of small greyish crystals, which resemble plumbago; has little tenacity. It fuses at 338° F. volatilizes at 347° F.; forming a beautiful violet-coloured vapour, called violaceous gas. Inclosed in a receiver, this gas becomes re-condensed into crystalline scales, or into iodine again; is soluble with alcohol and ether; the tr. for medical use is made with alcohol; water dissolves only the seven thousandth part. It forms acids with hydrogen (Hydriodic acid) and oxygene, (iodic acid). Has great affinity for hydrogen, uniting with it in a gaseous state, when the temperature is elevated, and takes it from other bodies greedily. This hydriodic acid, is rapidly absorbed by water, and largely dissolved in it; gives out white fumes on throwing it in the air, uniting with its aqueous vapour; forms neutral salts, with many bases—as hydriodate of potash, with that salt, (much used in medicine)—Hydriodate of soda, with that salt: this also has been medicinally used. Iodine corrodes metals quickly, and hydriodic acid, which is a colourless gas, reddens tr. of turnsole, and extinguishes flame.

Mode of preparing Iodine.—It exists in the mother waters, formed in the preparation of soda, from Fuci, reduced to kelp, by burning, in the state of hydriodate of potash; after the Fuci, which grow abundantly on the sea-shore of Normandy, are incinerated, the ashes are lixiviated, and the liquor concentrated. To procure the iodine, an excess of sulphuric acid is added to these waters, and the liquor gradually boiled in a glass retort to which a receiver is attached. The decomposition which results, by the union

of the sulph. acid with the potash of the hydriodate, and with the hydrogen of the hydriodic acid, produces vitriolated tartar, water, sulphureous acid, and iodine. The iodine enters the receiver in a violet gas, along with a little acid, and is there condensed. It is subjected to purification, by re-distillation with water containing some potash.

The preparations are: 1. Iodate of potash; 2. Hydriodate of potash; 3. Hydriodate of soda; 4. Solution of hydriodate of potash; 5. Tincture of iodine; 6. Ointment of hydriodate of potash; 7. In substance, seldom so used. *Coindet* of Geneva, first introduced this article into the materia medica. He recommends it as a powerful emmenagogue, for the cure of *Bronchocele* and *Scrophula;* Gimele has employed it in chronic leucorrhœa; Coster, of Paris, has used it successfully, in goitre; for the restoration of suppressed catamenia; to produce this flux, when retained beyond the proper age; and to destroy a predisposition to scrofulous phthisis, to remove glandular congestions, of a scrofulous, cancerous or syphilitic character, for scrofulous ophthalmia and venereal ulcers, (in 1823) Rickwood cured 4 cases of goitre with it; Mr. Callaway, surgeon, London, has cured several cases of scrofulous enlargements of glands of mesentery, with the tr. of iodine; dose of tr. 10 drops 3 times a day, increased to 20; ten drops contain *one* grain of iodine.

Iodine is also contained in the following sea-plants, viz:

Ord. 1. *Algæ.* Cl. *Cryptogamia.*

1. *Corallina officinalis. Corallina.* Coralline. Sea-moss. It is vermifuge, ℥ss to ℥j in coarse powder.
2. *Conferva rupestris*; called also *Muscus marinus.* Sea-moss. Refrigerant; used by the ancients, externally, in gout.
3. *Conferva Ægagropila.* Moor-balls, found at the bottom of salt water lakes; used to wipe pens.
4. *Tremella Nostoch. Nostoch. N. commune.* Star-shoot; a greenish jelly, found in the sea; eatable. Infused in brandy, to produce disgust of that liquor, in those who drink it.
5. *Mousse de Corse. Mousse de mer.* Sea-wrack; *Helminthocorton.* Under these names, are embraced several sea-plants, and all found in commerce, or the drug stores of Europe, mixed in one mass, generally called *Helminthocorton.* It is used as a vermifuge, and has great celebrity in Germany and France. The plants of which *Helminthocorton* consists are: 1. *Fucus Helminthocorton;* 2. *Conferva dichotoma;* 3. *Conferva fasciculata;* 4. *Conferva albida;* 5. *Conferva intertexta;* 6. *Corallina officinalis;* 7. *Fucus purpureus;*

8. *Fucus plumosus*; (these two last, less vermifuge than the others;) 9. *Ulva clavata*; 10. *Ulva prolifera*; 11. Different species of *Ceramia*, and other foreign substances, which the fishermen raise with it, and which are difficultly separated. All these plants are geniculated thread-like *Algæ*, and being mixed with the *Fucus Helminthocorton*, account for its different effects. *Helminthocorton* has been used from time immemorial, by the inhabitants of Corsica, as an anthelmintic. When that island was reunited to France in 1775, the medical officers of the military hospital of Ajaccio, communicated the knowledge of the virtues of this plant to France, whence it spread gradually throughout Europe; the Germans rely on it. Dose, in powder, 18 grains, to infants under 7 years; ℥ss to ℥jss to those past that age—in decoction ½ oz. to 6 oz. water—also in syrup.

No. 276.—Fuligo ligni. Wood-Soot.

A tea made of this substance, is an old remedy. "Soot-tea," Dr. Chapman says, "is used with advantage in flatulent colics of new born infants, and sometimes not less so in spasmodic affections of the stomach, in adults." I really regret, that Dr. C. should have introduced this disgusting tea into his book—Can any thing be more repugnant to our ideas of the delicacy of a new born babe's digestive functions, than to subject it, among its first subjects for action, to such trash? Besides this, it contains sulphate of ammonia, and is bitter—therefore totally unfit for such a purpose. I have noticed the subject, purely to drive it from your practice. Equally repulsive to my ideas of a *proper medicine*, is the mixture of soot and hickory ashes, of which he recommends a hot infusion for dyspepsia attended with acidity and spasms. Surely our materia medica is not so meagre as to oblige us to resort to such substances, by quarts and gallons, (as mentioned in the formula, of Dr. C.) And to assert, as he does, that this mixture is more useful than other alkaline mixtures, is really what the profession cannot bear him out in asserting. I trust cobwebs, soot, and ashes, at least in their crude states, will be left out of the next edition of Dr. Chapman's work—though I have no doubt these substances, chemically refined, might be found worthy of notice. It is the coarse and empirical aspect of the article in Dr. C.'s book, which I object to.

G.

No. 277.—Galangæ Radix. See *Kæmpferia* and *Maranta*.

No. 278.—GALBANUM, and GALBANI GUMMI RESINA. See No. 121.

No. 279.—GALLÆ. Galls—gall-nuts. See *Quercus*.

No. 280.—GAMBOGIA. See *Staligmitis*.

No. 281.—GAULTHERIA PROCUMBENS. Phar. U. S. Partridge-berry—mountain tea.

See W. P. C. Barton's Veg. Mat. Med. U. S. Vol. I.

Cabinet specimen, Jeff. Coll. No. 311—figure of the plant, No. 312.

No. 282.—GENTIANA. Gentian.

Cl. 5. Ord. 2. *Pentandria Digynia.* Nat. ord. *Rotaceæ*, Linn. *Gentianeæ*, Juss.

Corolla 1-petalled. *Capsule* 2-valved, 1-celled; with 2 longitudinal receptacles.

14 Species medicinal—

1. *Gentiana Lutea.* Yellow Gentian.
2. *Gentiana Saponaria.* Indigenous. See W. P. C. Barton's Flora of North America, Vol. III. plate 79.

Cabinet specimen, Jeff. Coll. No. 313—figure of the plant, No. 314.

3. *Gentiana Catesbæi.* Phar. U. S. Indigenous.
4. *Gentiana Ochroleuca.* Indigenous. See W. P. C. Barton's Comp. Fl. Phil. Vol. I.

Cabinet specimen, Jeff. Coll. No. 315—figure of the plant, No. 316.

5. *Gentiana Crinita.* Indigenous. See W. P. C. Barton's Flora of North America, Vol. III. plate 80.
6. *Gentiana Verna—Gentianella Verna.* Herb very bitter.
7. *Gentiana Autumnalis—Gentiana Amarella.* Fellwort—also bitter.
8. *Gentiana Cruciata.* Antiseptic, bitter.
9. *Gentiana Rubra.* A bitter tonic, used in Germany.
10. *Gentiana Purpurea.* A bitter tonic, used in Norway.
11. *Gentiana Campestris.* Root bitter, tonic.
12. *Gentiana Peruviana—Cachen.* Root bitter.
13. *Gentiana Pneumonanthe.* Calathian violet. Marsh Gentian. Less active than most of the others, but bitter.
14. *Gentiana Grandiflora—Gentiana Acaulis.* Very bitter.

The whole genus is characterized by bitterness, and in different parts of the world used as tonics. The indigenous

species would form excellent subjects for an inaugural dissertation. They doubtless will be found to contain the active principle discovered in *Gentiana Lutea*—viz. Gentia.

No. 283.—Gentiana lutea. Yellow Gentian.

Officinal. *Gentianæ, radix.* Lond. *Gentianæ Luteæ, radix.* Edin. *Gentiana, radix.* Dub. Gentian root.

Cabinet specimen, Jeff. Coll. No. 317—figure of the plant, No. 318.

This genus takes its name from Gentius, king of Illyria, its discoverer, who was vanquished by Anicius, the Roman prætor, A. U. 585, i. e. A. C. 167.

Native of Switzerland and Austria, the Appenines, the Pyrenees, but of no part of the United States—I doubt if of any part of North America, as stated by Mr. A. T. Thompson.

Qualities. Wrinkled pieces, of various lengths and thickness; taste intensely bitter, without being nauseous; cut transversely, the roots are yellowish and maculated, with a thick brown bark. The sensible qualities are extracted by alcohol, ether, and water—the two first extract a resin and bitter extractive matter—the water, some part of these, and a good deal of mucilage, which causes the infusion to be ropy. Diluted alcohol is the proper menstruum. In the bitter extractive, the virtues reside. Yields Gentia.

Medical Properties and Uses. Tonic and stomachic—its use of very ancient date. Used in dyspepsia, hysteria, and in all cases where a vegetable tonic bitter may be indicated. Dose, *in* substance, grs. x to ʒj.

Offic. Prep. *Extractum Gentianæ.* L. E. D. & U. S. *Infusum Gentianæ comp.* L. E. D. & U. S. *Tinct. Gentianæ comp.* L. E. D. *Vinum Gentianæ comp.* E.

Brodum's Nervous Cordial consists of the tinctures of Gentian, Calumba, Cardamom, and Bark, with comp. spirit of lavender, and wine of iron. *Stoughton's Elixir* is a tincture of Gentian, with the addition of serpentaria, orange-peel, Cardamom, and some other aromatics.

No. 284.—Gentia. (Has been called *Gentianina.*)

Cabinet specimen, Jeff. Coll. No. 319.

A sub-alkaline proximate principle of the preceding—discovered in it simultaneously, though without previous concert, by M. Henry and M. Caventou. Their analysis of the root shows it to contain—

1. A very fugacious odorous principle.
2. A yellow crystalline bitter principle, (Gentia.)
3. A matter identical with bird-lime.

4. A fixed oil.
5. A greenish substance.
6. A free organic acid.
7. Incrystallizable sugar.
8. Gum.
9. A yellow colouring matter.
10. Woody fibre.

Schrœder discovered a resinous and narcotic principle in it, and Mr. Planche found the latter.

Qualities. Inodorous; possesses strongly the aromatic bitterness of the root—more developed when it is dissolved in acid. Very soluble in ether and alcohol, from which it may be separated by spontaneous evaporation, in small yellow needle-like crystals—less soluble in cold water, which it renders very bitter—boiling water has more action on it. Its colour is deepened by the diluted alkalies, which dissolve rather more of it than water does. Alkalies impair its yellow colour—the solutions of it in sulphuric and phosphoric acids are nearly colourless—in the acetic, it is yellow; concentrated sulphuric acid carbonizes it, and destroys its bitterness. Exposed in a glass tube to the heat of boiling mercury, is partly decomposed, and partly sublimed in yellow crystalline needles. Gentia does not sensibly change the colour of turnsole, either when blue or when reddened by acids. Appears to be neutral. Not poisonous.

Medical Properties and Uses. A concentrated bitter tonic. A tincture of 5 grains to the ounce has been proposed as the best form of exhibition. A syrup of 15 grains to the ℔ of syrup, is said to be a good bitter, in scrofulous cases. Deserves further trial; and I trust some intelligent candidate will write an inaugural dissertation on it.

No. 285.—Geoffroya inermis. The Cabbage tree.

Officinal. *Geoffroya inermis, cortex.* Edin. *Geoffroyæ, cortex.* Dub. Cabbage tree bark.

Cabinet specimen, Jeff. Coll. No. 320—figure of the tree, No. 321.

A lofty tree, native of Jamaica, growing in savannahs.

Qualities. Disagreeable, sweetish, mucilaginous taste. The pieces in commerce externally grey, internally black, furrowed, pulverulent, yielding a powder resembling that of jalap. Its soluble components are chiefly mucus, resin, extractive, saccharine matter, and a narcotic principle.

Medical Properties and Uses. Cathartic and narcotic—reputed powerfully anthelmintic, for lumbrici, according to Dr. Wright. It is said to have been first noticed for

this property by Mr. Peter Duguid. May be given in powder, decoction, extract, and syrup—the decoction most used. Must be given at first in small doses, gradually increased till nausea be excited; in over-doses, occasions sickness, vomiting, fever, and delirium. Owing to its deleterious effects, it has not been much employed.

Dose, of the powder, ℈j to ʒss—of the extract, (which is made by evaporating the decoction,) grs. iij. Dose of the syrup, (which is the decoction, with a double portion of sugar added,) from 2 to 4 spoonfuls.

Offic. Prep. *Decoctum Geoffroyæ inermis.* E.

No. 286.—Geranium maculatum. Spotted crane's-bill. Crowfoot Geranium.

Officinal. *Radix.* U. S. The root.

Astringent. Dose, ʒss of the powder—fʒij of the tincture—fʒj to fʒij of the decoction and infusion—grs. x of the extract.

For a detailed account, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. I. and Ives' ed. Paris's Pharm. Vol. II.

Cabinet specimen, Jeff. Coll. No. 322—figure of the plant, No. 323.

No. 287.—Geum. Avens.

Cl. 12. Ord. 8. *Icosandria Polygynia.* Nat. ord. *Senticosæ* Linn. *Rosaceæ*, Juss.

Two species medicinal—

1. *Geum Urbanum.* Common Avens, or Herb Bennet.

Officinal. *Radix.* The root. Dub.

Astringent, tonic, antiseptic. Dose, of the powder, ʒss to ʒj, four times a day—of the decoction, fʒj, every hour—of the tincture, fʒss, properly diluted, 3 or 4 times a day.

Cabinet specimen, Jeff. Coll. No. 324—figure of the plant, No. 325.

2. *Geum Rivale.* Water Avens. *Radix.* Phar. U. S.

No. 288.—Gillenia trifoliata, } Indian physic.
——— stipulacea, } Bowman's root

Cabinet specimens, Jeff. Coll. Nos. 326 and 327—figures of the plants, Nos. 328 and 329.

Emetic. For detailed account of both, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. I. and Ives' ed. Paris's Pharm.

No. 289.—Glycyrrhiza glabra. Common Liquorice.

Officinal. *Glycyrrhizæ, radix.* Lond. Dub. *Glycyrrhizæ, radix et extractum.* Edin. & U. S. Liquorice-root, and the extract.

Cabinet specimen, Jeff. Coll. No. 330—figure of the plant, No. 331.

Qualities and uses well known—they depend on a peculiar modification of saccharine matter (*Glycion,*) allied to *sarcocoll,* and mucus.

Offic. Prep. *Extractum Glycyrrhizæ.* L. E. D. & U. S. *Decoctum Sarsaparillæ comp.* L. D. *Infusum lini.* L. *Confectio Sennæ.* L. E.

No. 290.—Granati Cortex. *Punica granatum Pomorum Cortex.* Pomegranate bark. See *Punica.*

No. 291.—Gratiola officinalis. Hedge hyssop. *Herba,* of the European Colleges.

Cabinet specimen, Jeff. Coll. No. 332—figure of the plant, No. 333.

Cathartic, diuretic, and emetic—used on the continent of Europe, but not in U. S. Dose, in powder, grs. xv to ʒss—of the infusion, made with ʒij of the dried herb, and ℥ss of warm water, from f ʒiv to f ʒj—3 times a day.

No. 292.—Guaiacum officinale. Officinal *Guaiacum.*

Officinal. *Guaiaci resina et lignum.* Lond. *Guaiaci officinalis Lignum-resina.* Edin. *Guaiacum; Lignum, gummi-resina.* Dub. The wood and resin of guaiacum. *Guaiaci Lignum et Guaiaci resina.* Guaiacum wood, called *Lignum vitæ,* and resin of Guaiacum. U. S.

Cabinet specimens, Jeff. Coll. Nos. 334, 335, and 336—figure of the plant, No. 337.

A tree forty feet high—native of Jamaica, and South America.

Qualities. Wood inodorous; but when heated, emits an aromatic odour—taste bittterish, sub-acrid, biting—very hard, heavier than water—appearance well known, in boy's tops and other toys. The turner's chips, are used in medicine. The *resin* called *guaiac,* has the aspect of a gum-resin—colour greenish-brown—easily pulverized—the powder is at first grey, becoming green on exposure to light and air, probably by absorbing oxygene—becomes

hard and condensated, if left in the bottle long undisturbed. Melts by heat, sp. gr. 1.2289. Water dissolves out of it, 9 per cent. of extractive matter—alcohol 95, and ether 40 parts in a hundred. The alkaline solutions, and their carbonates, readily dissolve it. Sulphuric acid dissolves it, with but little effervescence——the solution being of a rich claret colour. Nitric acid dissolves it, with a copious extrication of nitrous fumes. Muriatic acid dissolves but little of it; in all these cases, the guaiac is decomposed. Mr. Hatchett has proved by experiments, that it is not a gum nor a gum-resin, but a substance *sui generis*.

Medical Properties and Uses. Stimulating, diaphoretic, diuretic; in large doses, purgative. May be given in a bolus, or diffused in water, by means of ½ its own weight of gum Arabic. Dose, grs. x to ʒss.

The ammoniated tinct. is Dewees's emmenagogue.

Is sometimes adulterated with common resin, which may be detected by the turpentine emitted, when the guaiac is thrown on hot coals—sometimes with manchinal gum, which may be discovered by adding to the tincture a few drops of sweet spirit of nitre, and diluting with water—the guaiac is thus precipitated, and the sophisticating article flows in white striæ.

Offic. Prep. *Mistura Guaiac.* L. *Tinct. Guaiac.* L. E. D. & U. S. *Tinct. Guaiac. Ammoniat.* L. E. D. & U. S. *Pulv. Aloes Comp.* L. D.

H.

No. 293.—Hedeoma Pulegioides. American Pennyroyal.

See W. P. C. Barton's Veg. Mat. Med. U. S. Vol. II.

Cabinet specimen, Jeff. Coll. No. 338—figure of the plant, No. 339.

No. 294.—Hæmatoxylon Campechianum. The logwood tree.

Officinal. *Hæmatoxyli lignum.* L. E. D. & U. S. Logwood.

Cabinet specimen, Jeff. Coll. No. 340.—figure of the tree, No. 341.

This tree is a native of South America, attaining to great perfection at Campeachy, in the Bay of Honduras; introduced into Jamaica, in 1715; and, from its rapid growth, now grows abundantly there, so as to incommode the landholders, in the neighbourhood of Savanna la Mar.

Qualities. Appearance well known—taste sweet and astringent, colour deep-red—yields *Hematina.*

Medical Properties and Uses. An astringent—not very

powerful—used in protracted dysentery, and diarrhœa—used in extract and decoction—of the latter, 2 or 3 fluid ounces may be taken frequently. Does not appear to be a useful medicine; and in U. S. seldom employed.

No. 295.—Hematina. *Hematine.*

Small brilliant crystals, of a reddish-white colour, and a slightly astringent, bitter and acrid taste, discovered in the analysis of the preceding, by Chevreul; he called it hematin, to which, for uniformity of termination, I have added the terminal letter. Besides this principle, Chevreul's analysis proved that logwood contains a volatile oil, tannin, and two kinds of colouring matter, one of which is soluble both in water and alcohol—the other in alcohol only. Hematina has never been applied to medicine—an experimental thesis on it, would entitle the candidate for a degree, to credit. To obtain hematina, digest logwood rasped, in water, at 125° F. filter, and evaporate to dryness. Digest the residue for a whole day in alcohol of sp. gr. 0.837, filter and concentrate by evaporation; then add a small portion of water, evaporate a little farther, and leave it to itself—crystals of hematina are formed in abundance.

No. 296.—Helleborus albus. White Hellebore, the root of *Veratrum album*, which see.

No. 297.—Helleborus.

Cl. 13, Ord. 6. *Polygamia Polygynia.* Nat. ord. *Multisiliquæ*, Linn. *Ranunculaceæ*, Juss.

Two species medicinal—

1. *Helleborus Niger.* Black Hellebore.
2. *Helleborus Fœtidus.* Stinking or fetid Hellebore.

No. 298.—Helleborus fœtidus. The leaves—Bears-foot—Stinking Hellebore, Setterwort.

Synonym—Helleboraster, Pharm. Lond.

Cabinet specimen, Jeff. Coll. No. 342—figure of the plant, No. 343.

Root small, beset with numerous dark slender fibres—perennial.

Stem 18 inches to 2 feet high; towards the bottom, round, strong, firm, naked, and marked with alternate cicatrices, the vestiges of former leaves—branched and sub-divided at top, and garnished with scaly leaves or bracteas.

Leaves numerous, on long footstalks, which surround the stem at base—palmate; folioles lanceolate, serrate; bracteal leaves, lanceolate-trifid—often purplish.

Flowers numerous, terminal, pendant, globose, on long peduncles, forming a kind of umbel. Petals 5, oval, concave, persistent, pale-green, margins tinged with purple; Stamens the length of the petals; anthers white; germens 3, hairy, resembling those of *Helleborus niger*. A native of England.

Flowers about March.

Medical Properties and Uses. Smell of the recent plant, extremely fetid, taste bitter, acrid, excoriates the mouth and fauces; commonly operates as a cathartic, sometimes as an emetic; in large doses, very deleterious.

As an anthelmintic—affecting the round worms; Bissett considers it the best medicine for this purpose; a decoction of a dram of the green leaves, or 15 grains of dried, in powder, to children between 4 and 7 years; proves somewhat emetic, and purges. Repeated 2 or 3 successive mornings—Used also in form of syrup with coarse sugar, and bruised green leaves, moistened with vinegar; a tea spoonful the dose to children between 2 and 6 years—tr. of Rhub. used after it, if it does not purge.

HELLEBORUS TRIFOLIUS, (of Dyckman's ed. of Edin. Disp.) is not properly referred to the genus *Helleborus*. It is the *Coptis trifolia*, (which see)—or Gold-thread, of the Pharm. of the U. S.—of Bigelow and Barton's Med. Botany, and of some of the dispensatories. It is an antiseptic bitter, possessing some astringency; native of the white mountains of New-Hampshire and other parts of New-England, where it is much used, in aphthous affections, particularly of children.

No. 299.—Helleborus niger, or Melampodium. Black Hellebore——Christmas Rose, or Christmas flower—true Black Hellebore.

Synonyms—Helleborus niger legitimus. (Clusius.)
Helleborus niger flore roseo. (Bauhin.)
Helleborus niger verus. (Gerard.)

Officinal. *Hellebori nigri, radix.* Lond. *Hellebori nigri, radix*—(*Melampodium*) *radix.* Dub. The root of Black Hellebore. *Helleborus niger, radix.* U. S.

Cabinet specimen, Jeff. Coll. No. 344—figure of the plant, No. 345.

Root perennial, rough, knotted or gibbous, externally blackish, internally yellow, sending off many strong, round, long fibres.

Flower-stalks erect, round, tapering, and towards the bottom reddish—calix bracteiform, consisting of oval, concave,

emarginated segments. Petals 5, large, sub-rotund, spreading, at first white, afterwards reddish, and finally becoming greenish. Nectaries about 8, tubulated, slightly compressed, bilabiated, greenish yellow Filaments white, anthers yellow; germens from 4 to 8; seeds shining, blackish, numerous.

Leaves compound, or rather pedate simple; all radical, on long petioles. Folioles elliptical, smooth, thick, and serrated towards apex. Often vary to the lanceolate form.

Native of Austria and Italy; first cultivated in England, by Gerard, in 1596; flowers, in mild seasons, in January. In the U. States, not before May or April.

Whether this be the Ελλεβορος μελας and Μελαμποδιον, of the Greeks, and the *helleborus; Elleborus; verutrum*, of the Latins, cannot now be certainly determined. *Melampodium*, is supposed to be derived from *Melampus*, an ancient physician, who used it in mania, as an alterative purge. The following plants have been ignorantly substituted for this, in Europe, viz: *helleborus viridis. Adonis autumnalis; Trollius Europæus; Actæa spicata; Astrantia major;* and *Aconitum Napellus*—in the United States, the *Cimicifuga serpentaria;* all these possess different properties from the true black Hellebore. The internal part of the fibres of *Cimicifuga serpentaria* are white, not yellow, by which it may be distinguished from the Hellebore, which is also generally found in commerce, twisted or plaited by its fibres.

Qualities. Taste of fresh root bitterish, somewhat acrid; and according to Grew, retained in the mouth some time after chewing, affects the tongue with paralysis—giving the sensation as if the mouth and tongue were scalded. It emits a nauseous acrid smell; its sensible properties and medicinal activity, are diminished by keeping. Bergius says, recent it is poisonous, rubifacient, vesicating; recently dried, emmenagogue, purgative, sternutatory; long kept, slightly purgative, alterative, diuretic.

Medical Properties and Uses. Employed in Europe, chiefly as an alterative, and there, as well as in the U. States, the tincture of the root (tr. *Melampodii*) is much used as an efficacious emmenagogue. It is, for this purpose, powerful and effective. Dose, from ♏xv to ℥j or ℥jss.

The root has been used in dropsies; in *lepra Græcorum*. The watery extract is the best formula—contains both the purgative and diuretic properties. Dose grs. 10 to ʒj. This species is not considered by Willdenow, the Hellebore of the ancients—which he thinks is the **Helleborus orientalis, or Anticyran Hellebore.**

Offic. Prep. *Tinctura Hellebori nigri.* L. E. D. and U. S. *Extractum Hellebori nigri.* E. D.

No. 300.—Helminthocorton—See *Fucus.*

No. 301.—Heracleum gummiferum. Gum-bearing Heracleum.

Cl. 5. Ord. 2. *Pentandria Digynia.* Nat. Ord. *Umbellatæ.*

Officinal. *Heracleum Gummiferum—Gummi resina.* U. S. Ammoniacum. *Ammoniacum.* L. E. D. Ammoniac.

Cabinet specimen, Jeff. Col. No. 346—figure of the plant, No. 347.

Native of Africa and East Indies; 10 feet high; resembles the fennel plant. The juice exudes from punctures made in the plant, by the horned beetle—and from incisions made into it, from which it is allowed to drop on the ground, and harden in the sun and air. This is ammoniac; the best comes from the E. Indies, in large masses, composed of fragments, or tears united together; or in dry tears separated from each other, which is generally considered a sign of its goodness. These tears are yellow without—white within.

Qualities. Has a peculiar, faint, but not unpleasant smell; a bitter nauseous sweet taste. Specific gravity, 1.207—is adhesive in the hand; softens by heat, but does not melt; partially soluble in water, ether, alcohol, vinegar, and solutions of alcohol; triturated with water, a milky fluid is formed, which is a solution of gum, holding the resin in solution; it is called *Lac ammoniac.* Ammoniacum consists of gum-resin, gluten, and some volatile matter. Water appears its proper solvent, particularly if yolk of egg be added.

Medical Properties and Uses. Antispasmodic, and by this and its stimulating and some diaphoretic effect, is expectorant. In large doses, purgative; may be given in solution, in pills with bitter extracts, myrrh, and other gum-resins, rubbed with camphor, a mass is quickly produced, suitable for pills; may be combined with tart. emetic, squills, assafœtida, and ipecacuanha; vinegar softens it so that it can be used as a plaster. Dose, grs. x to ʒss.

Offic. Prep. *Mistura Ammoniaci.* L. D. & U. S. *Emplastrum Ammoniaci.* L. & U. S. *Emplastrum Ammoniaci cum Hydrargyro.* L. *Emplastrum Gummosum.* E. *Pilulæ scillæ comp.* L. E.

No. 302.—Heracleum lanatum. Cow-parsnip—masterwort.

Officinal. *Radix.* The root. U. S.

The largest umbelliferous plant indigenous to the United States. The umbels, the seeds, and dried leaves, exhale a most delicious fragrance. I recommend this plant as a subject for an inaugural dissertation—believing it will reward the investigator for any analysis he may bestow on it. It doubtless yields a gum-resin, similar to ammoniacum—See W. P. C. Barton's Comp. Fl. Phil. Vol. I. p. 159.

No. 303.—Hirudo medicinalis. The Leech.

Each leech draws about $\frac{\mathfrak{z}}{\mathfrak{z}}$ss of blood. This may be considered the fair average,—some few drawing more, and some few less. It is requisite to remember this, that the blood to be evacuated may be gauged. These remarks have reference to the European leech,—the American leech is a very distinct variety, if not a different species; and neither makes so large an orifice in the skin, nor abstracts so large a portion of blood.

No. 304.—Hordeum distichon. Common Barley.

Officinal. *Hordei semina.* Lond. *Hordeum distichum; semina.* Dub. *Hordei distichi, semina.* Edin. Barley. *Hordeum distichon, semina decorticata.* U. S. Barley, the seeds decorticated.

Cabinet specimen, Jeff. Coll. No. 348.

The U. S. pharm. appellation is the only correct one, of those enumerated above—pearled barley seeds, and not the seeds of barley in their natural state, implied by the names of the foreign Colleges, being the preparation recognised in the Materia Medica.

A restorative dietetic, of great value.

Offic. Prep. *Decoctum Hordei.* L. E. D. & U. S. *Decoctum Hordei comp.* L. D. & U. S.

No. 305.—Humulus Lupulus. The hop.

Cl. 22. Ord 5. *Dioicia Pentandria.* Nat. ord. *Scabridæ,* Linn. *Urticæ,* Juss.

Officinal. *Humuli Strobili.* Lond. Dub. & U. S. The strobiles of the hop (*strobili sicculi,* Paris's Pharm.)—for which I would propose to substitute

Off. *Humulus Lupulus; Lupuli Strobili siccati.* The resinous product of the cones of hop.

Cabinet specimen, Jeff. Coll. No. 349—figure of the plant, No. 350.

Hop is indigenous to Europe and the United States.

Qualities. Odour fragrant, sub-narcotic; taste bitter, astringent, aromatic; yield Lupula. Boiling water, alcohol,

and ether, extract their virtues—coction dissipates their aroma. Cold infusion more grateful than the warm. Its colour is deepened by alkalies, and rendered turbid by the mineral acids; metallic salts decompose it.

Medical Properties and Uses. Tonic, narcotic—I would not say, diuretic. Hop tea is a weak, tranquillizing anodyne, uniting some degree of tonic effect in its operation. The character of hops, as a medicine, has been driven backwards and forwards like a shuttlecock between battledores. It has not fallen to the ground, but has been at length suffered to lay on the table, where I found it, elevated to about that height from the ground, which I have designated above. I cannot, with Mr. A. T. Thompson, express any surprise, "that the Edinburgh College has adopted it in their list of Materia Medica." May be used as a fomentation, in infusion, tincture, and extract—(absurd in form of powder.) Dose of infusion, made with ℥ss of hops, and Oj of boiling water, f℥iss, with l℥ss cinnamon water, twice or thrice a day—of the tincture, f℥ss to f℥j, twice or thrice a day—in *mania a potu*.

Offic. Prep. *Extractum Humuli.* L. *Tinctura Humuli.* L. E. & U. S.

LUPULA. Lupulin.

The resinous natural product found between the squamæ of the hop-cones, chiefly at their base, where it appears to be the secretion of the nectaries of the flowers—known as long as hops have been used in the preparation of malt liquor—(since the time of Henry VIII.)—and called hop dust, hop powder, yellow hop dust, &c. by the brewers. To Dr. Ansel W. Ives, of New-York, the Materia Medica is indebted for a discovery of the fact, that this powder contains *all* the virtues of the hop-cones. He called it *Lupulin*, a term analogous to the first received names of the proximate principles of vegetables, obtained by chemical analysis. This being the proximate principle, naturally produced, of the hop-cones, I have modified this name for uniformity with the general syllables of the proximate principles, which are now made to end in *a* and *ia*. Dr. Smith had observed, that the fragrance and essential properties of the hop resided in this resinous secretion—after his observations were published, Dr. Ives pursued the idea, and proved, by a series of interesting experiments, that Dr. Smith's notion was correct. He found, in these experiments, that the powder consisted of tannin, extractive matter, a bitter principle, wax, resin, and a woody fibrous principle, which he was unable to separate, in the form of a volatile essential oil. The pure powder, obtained without any of the chaff of the strobiles, barely contains tannin. The scales and the leaves of the plant strike a black colour with the sulphate of iron.

MM. Payen and Chevallier found the cones of the French hop to consist of the following substances:—

1. Water.
2. Essential oil.
3. Super-acetate of ammonia.
4. Carbonic acid.
5. A white vegetable matter, soluble in boiling water, (which, when precipitated on cooling, does not re-dissolve in that fluid.)
6. Malate of lime.
7. Albumen.
8. Gum.
9. Malic acid.
10. Resin.
11. A peculiar green matter, the bitter principle of the hop.
12. A fatty matter.
13. Chlorophylle.
14. Acetates of lime and ammonia.
15. Nitrate, muriate, and sulphate of potass.
16. Sub-carbonate of potass.
17. Carbonate and phosphate of lime.
18. Traces of phosphate of magnesia.
19. Sulphur.
20. Oxide of Iron.
21. Silica.

The Belgic and English hop, subjected to similar trials, yielded the same principles, but in different proportions. The French contained more essential oil than the Belgic, and less than the English. Hops, soon after being collected, yield, under similar circumstances, more essential oil, and less resin, than the old; which induced MM. Payen and Chevallier to think, that the oil is susceptible of being resinified. They described the Lupula, under the name *Matière jaune du houblon*. M. Planche speaks of it under the same name.

The essential oil, obtained by the chemists above mentioned, is similar in odour to the hop, but much more penetrating, narcotic, and very acrid in the throat. It is soluble to a great extent in water, and very volatile. Dr. Desroches, published an essay on the hop, in 1808. He referred the narcotic virtue, to this oil. Dr. Ives imagines, it resides in the resinous extract. About 15c pounds of hops yield, by threshing and sifting, about 2o pounds of Lupula. I am able to corroborate Dr. Ives's experience of the fact, that keeping in close-stopped vessels does not deteriorate its properties. The cabinet specimen is five years old: and is the residue of a large portion I obtained from newly-dried hops: and part of which I extensively prescribed in the Alms-House Infirmary, several years ago.

I think it decidedly preferable to any of the officinal or common preparations of hop. The dose, however, specified by Dr. Ives, I found much too small. I gave it in 6 and 10 grains at a time, several times a day; and have administered in *mania a potu* scruple doses, often repeated. I did not use any preparation, of the native product; neither can I perceive any better form of internal exhibition, than that of pure Lupula. There are few physicians in this city, who have used this product—none so extensively as myself, both in public, private, and charity practice; and I am of opinion, that its peculiar effect of giving tone to the system, inducing tranquillity in diseases of great irritation of the nervous system, and producing sometimes, but not often, a renovating sleep, without even affecting the head—should entitle it to more notice, and more frequent exhibition. Of its powers, externally applied, I know nothing from experience. Dr. Freack, (Pharmacopæia Ruthenica,) recommends an ointment prepared with the powdered hops, and lard, as a remedy for cancer—to be used in the last stage of the disease, to assuage agony which other remedies could not moderate. Dr. Ives very justly proposes to substitute an ointment of 1 part of Lupula, and 3 of fresh lard, for that of Freack.

Offic. Prep. proposed—(for the mode of preparing which, see Paris's Pharm. by Ives.) *Tinctura Lupulæ. Extractum Lupulæ. Syrupus Lupulæ. Unguentum Lupulæ.*

No. 306.—Hydrargyrum and Hydrargyrus, of the Colleges—Mercury, or Quicksilver.

Not applied, in its metallic state, to medical purposes—though it has occasionally been given internally, to overcome ileus by its mechanical weight. The salts formed with it are numerous, and among the most important of Materia Medica.

Officinal Preparations.

I. By distillation to purify the metal.
1. *Hydrargyrum purificatum*, L. E. D. & U. S.

II. By trituration; (*suboxidized.*)

a. With animal fat.
2. *Unguentum hydrargyri fortius.* L. *Ung. hydrargyri, D*
3. ——— *hydrargyri*, E. & U. S.
4. ——— *mitius*, L. D.
5. *Linimentum hydrargyri*, L.
6. *Emplastrum ammoniaci cum hydrargyro*, L. D.
——— *hydragyri*, L. E. & U. S.

b. With saccharine substances.
7. *Pilulæ hydrargyri*, L. E. D. & U. S.

c. With carbonate of lime.
8. *Hydrargyrum cum cretâ*, L. D.
d. With carbonate of magnesia.
9. *Hydrargyrum cum magnesia*, D.
III. By the action of heat and air; (*oxidized.*)
10. *Hydrargyri oxydum rubrum*, L. *Oxydum hydrargyri*, D.
IV. By the action of acids.
a. With sulphuric acid; (*sub-oxidized.*)
11. *Subsulphas hydrargyri flavus*, E. & U. S. *Oxydum hydrargyri sulphuricum*, D.
b. With nitric acid; (*suboxidized.*)
12. *Unguentum hydrargyri nitratis*, L. E. *Unguentum supernitratis hydrargyri*, D.
13. *Unguentum nitratis hydrargyri mitius*, E. & U. S.
——————(*oxidized.*)
14. *Hydrargyri nitrico-oxydum*, L. & U. S. *Oxydum hydrargyri rubrum per acidum nitricum*, E. *Oxydum hydrargyri nitricum*, D.
15. *Unguentum hydrargyri nitrico-oxydi*, L. & U. S. *Unguentum oxidi hydrargyri rubri*, E. *Unguentum subnitratis hydrargyri*, D.
c. With muriatic acid.
† sublimated; (*oxidized.*)
16. *Hydrargyri submurias*, L. & U. S. *Submurias hydrargyri mitis*, E. *Submurias hydrargyri sublimatum*, D.
17. *Pilulæ hydrargyri submuriatis*, L.
——————(*oxidized and acidified.*)
18. *Oxymurias hydrargyri*, L. & U. S. *Murias hydrargyri corrosivus*, E. *Murias hydrargyri corrosivum*, D.
19. *Liquor hydrargyri oxymuriatis*, L. & U. S.
Precipitated; (*oxidized.*)
20. *Submurias hydrargyri præcipitatus*, E. D.
d. With acetous acid; (*suboxidized.*)
21. *Acetis hydrargyri*, E. *Acetas hydrargyri*, D.
V. By precipitation with earths and alkalies from acid solutions.
a. By lime-water from the nitric solution; (*suboxidized.*)
22. *Hydrargyri oxydum cinereum*, L. & U. S.
b. By ammonia from the nitric solution; (*suboxidized.*)
23. *Oxydum hydrargyri cinereum*, E. *Pulvis hydrargyri cinereus*, D.
c. By ammonia from the muriatic solution; (*oxidized.*)
24. *Submurias hydrargyri ammoniatum*, D. & U. S. *Hydrargyrus præcipitatus albus*, L.
25. *Unguentum submuriatis hydrargyri ammoniati*, D & U. S. *Ung. hydrargyri præcipitati albi*, L.
VI. Combined with sulphur.
a. By trituration.
26. *Sulphuretum hydrargyri nigrum*, E. D. & U. S.
b. Sublimated.
27. *Hydrargyri sulphuretum rubrum*, L. D. & U. S

No. 307.—Hydrargyri sub-murias ammoniatus. U. S. Ammoniated sub-muriate of mercury. *Hydrargyrum præcipitatum album.* L. *Sub-murias Hydrargyri ammoniatum.* D. Formerly, white precipitate.

Cabinet specimen, Jeff. Coll. No. 351.

An impalpable snow-white powder, without taste. It is a triple compound, of the oxide of mercury 81, muriatic acid 16, ammonia 3 parts. Insoluble in water and alcohol; does not become black, when commingled with lime-water; only used to make an ointment with lard.

Offic. Prep. *Ung. hydrargyri præcipitati albi.* L. D.

No. 308.—Hydrargyrum cum Creta. L. D. Mercury with chalk.

Cabinet specimen, Jeff. Coll. No. 352.

It is quicksilver, slightly oxydized by rubbing it in a mortar with chalk: 3 grains contain one of mercury. Is a mild antacid, and good preparation of mercury; has been used in cases of intractable syphilis. Dose, grs. v to ʒss.

No. 309.—Hydrargyri Nitrico-Oxydum. L. & U. S. *Oxydum Hydrargyri rubrum per acidum Nitricum.* D. Nitric oxyd of mercury, called Red Precipitate.

Cabinet specimen, Jeff. Coll. No. 353.

An acrid corrosive substance, in small bright-red scales—taste acrid and corrosive—is a sub-nitrate of mercury—slightly soluble in water; very soluble in nitric acid, without effervescence. Used externally.

Offic. Prep. *Unguentum hydrargyri nitrico-oxydum.* L. E. D. & U. S.

Sophisticated with minium, which may be detected by digesting it in acetic acid, and adding salphuret of ammonia, which will throw down a dark-coloured precipitate. To be pure, it ought to be entirely volatilized by heat.

No. 310.—Hydrargyri Oxydum Cinereum. L. E. & U. S. *Pulvis Hydrargyri Cinereus.* D. Grey oxide of mercury.

Cabinet specimen, Jeff. Coll. No. 354.

An impalpable grey powder, without taste, fading on exposure to air and light. As found in the shops, is a mixture of the triple salt, consisting of the oxide of mercury, am-

monia, and nitric acid; properly prepared, is a protoxide of mercury. Preferred by Mr. Abernethy to the red sulphuret, for purposes of fumigation, because it does not yield any oppressive vapour. Saunders proposed it, in lieu of Plenck's remedy. Dose, gr. i to grs. iij, in pill, twice a day. Not much used in the United States

Offic. Prep. *Unguentum oxyd. hydrarg. ciner.* E.

Formula— R Hydrargyri oxyd. cinerei, grs. xv
Micæ panis, 3j
Mellis q. s.

Make a mass, to be divided into 30 pills—dose, 1 or 2, three times a day.

No. 311.—Hydrargyri Oxydum rubrum. L. *Oxydum Hydrargyri.* D. Red oxyd of mercury. (The *precipitate per se* of the old chemists.)

Cabinet specimen, Jeff. Coll. No. 355.

Minute, crystalline, deep-red, acrid, caustic scales, soluble in several of the acids without decomposition—imperfectly soluble in water, from which ammonia readily precipitates it—should be volatilized by heat. An active medicine, apt to affect the stomach and bowels, on which account it is but little used—was the favourite mercurial of John Hunter, and other eminent practitioners of his time. Dose, gr. i, combined with gr. ss of opium.

Formula— R Hydrargyri oxyd. rubri, gr. i
Opii tertiam grani partem,
Caryophylli olei, mj
Fiat pilula, h. s., per hebdomadam sumenda.
John Hunter.

Prescribed in venereal cases. When this pill did not affect the mouth in a week's lapse, he repeated it morning and evening. If experience proved that the patient's mouth was not affected by the use of it, he increased it to two grains in the evening, and one in the morning.

No. 312.—Hydrargyri sulphuretum rubrum. L. & U. S. *Sulphuretum Hydrargyri rubrum.* D. (Formerly *Hydrargyrus suphuretus ruber.* P. L. 1817. *Cinnabaris factitia*, 1745.) Red sulphuret of mercury, (formerly Cinnabar.)

Cabinet specimen, Jeff. Coll. No. 356.

A red crystalline cake, inodorous, insipid, insoluble in water, alcohol, acids, and alkalies; the last decompose when melted with it. Nitro-muriatic acid decomposes it; it unites with the metal and liberates the sulphur. Is a bi-sulphuret of mercury, consisting of two proportions of sulphur and one of mercury; used for mercurial fumigation, ℥ss. is thrown on red-hot iron, and the fumes inhaled —this generally produces violent salivation. Used in cases where the venereal disease has invaded the mouth, nose, and throat, and where it is desirable speedily to arrest its progress. Pearson says, this inhalation does not preclude the necessity of simultaneous frictions with mer. oint. It is supposed peculiarly beneficial for ulcers, and excrescences about the anus and pudendum of women. It was formerly much used in doses of grs. x. to ℥ss, made into an electuary or bolus, in cutaneous diseases, gout, rheumatism, worms, syphilis; now only used for its vapour, for which purpose it is supposed not so good, as the grey oxide. This salt is known in commerce by the name of *vermilion*, and is used as a pigment; giving a fiery, or intense orange-red hue, to whatever is painted with it—it is seldom sold unadulterated; red-lead, dragons-blood, and chalk, being commonly mixed with it; it is also sometimes called *cinnabar* in commerce, the chief of which is manufactured in Holland. According to Paris, "Chamberlain's restorative pills," consist of "cinnabar, sulphur, sulphate of lime, and a little vegetable matter, perhaps gum."

No. 313.—Hydrargyri sub-sulphas flavus.

U.S. *Sub-sulphas Hydrargyri flavus.* Edin. Yellow sub-sulphate of Mercury. *Oxydum Hydrargyri sulphuricum.* Dub. Sulphuric oxide of mercury. (*Hydrargyrus vitriolatus.* P. L. 1787.) (Formerly, Turpeth mineral.)

Cabinet specimen, Jeff. Coll. No. 357.

A bright gamboge-yellow powder, inodorous, acrid to the taste. By trituration with mercury, is changed into the black oxide, and is decomposed at a red heat, the oxygen being driven off, and the metal reduced: is emetic and errhine: violent in its operation; hence seldom prescribed as an internal remedy. As an errhine, is useful in such affections as call for the action of that class of external remedies. Its violence renders it requisite to sheathe it with starch or liquorice powder, in proportion of grs. v. to gr. i. of the sub-sulphate. Pukes powerfully, in dose of grs. v.

No. 314.—Hydrargyri sulphuretum nigrum L. E. & U. S. Black sulphuret of mercury. (*Hydrargyrus cum sulphure.* P. L. 1787.)—formerly Ethiops mineral.

Cabinet specimen, Jeff. Coll. No. 358.

A black, impalpable, insipid, inodorous powder, consisting of one proportion of mercury and one of sulphur; it is therefore a true sulphuret, but is changed into a bi-sulphuret by being heated with access of air. Soluble entirely in a solution of pure potass, from which the acids precipitate it unchanged; insoluble in nitric acid. Sophisticated with ivory-black, which may be known by the residue, after throwing the suspected preparation on red-hot iron; is sometimes mixed with equal parts of crude antimony. Is often imperfect, the globules of mercury being visible under a lens—equally imperfect, when it whitens gold, on which it is rubbed. Is supposed to be alterative in doses of grs. v. to ℥ss; nearly obsolete.

No. 315.—Hydrargyrum cum magnesia. Dub. Mercury with magnesia.

Cabinet specimen, Jeff. Coll. No. 359.

An absurd preparation—good for nothing.

No. 316.—Acetas Hydrargyri. Edin. Dub. Acetate of mercury.

Cabinet specimen, Jeff. Coll. No. 360.

Properly prepared, is in small flat crystals of argentine whiteness; acrid, soluble in hot water—hardly in cold. Insoluble in alcohol; alkalies and heat decompose it; light blackens it. Anti-syphilitic, alterative; dose gr. i. night and morning; is the active ingredient, in Keyser's Pills; grs. ii. in f ℥j of rose-water; used in cutaneous affections.

No. 317.—Hydrargyri oxy-murias. L. & U. S. *Murias Hydrargyri corrosivus.* E. D. Oxy-muriate of mercury. Corrosive muriate of mercury—called, corrosive sublimate.

Cabinet specimen, Jeff. Coll. No. 361.

A crystalline mass, of small prismatic crystals, easily pulverized, undergoing slight change when exposed to the air, becoming opaque and powdery on the surface; has no odour, but a very acrid taste, with metallic astringency: is considered a bi-chloride of mercury, consisting of one proportion of mercury, and two of chlorine. Soluble in 11 parts cold, 3 of boiling water, and in 4 parts of

alcohol; is very soluble in ether, which attracts it from its solution in water, if agitated with it. Its solubility in water is much increased by adding a few drops of rectified spirit, or muriatic acid—is 17 times more soluble in a solution of ammonia, than in water; but no decomposition ensues, forming probably a triple salt. Is soluble in sulphuric, nitric, and muriatic acids, from which it is reclaimed unaltered, by evaporating the solutions. According to Dr. Davy, it forms definite compounds with muriatic acid, common salt, and other muriates. Paris says, the supposed change of vegetable blues to green, by its watery solution, is an optical illusion; the seeming change being owing to the union of the yellow of the sublimate, with the violet blue of the syrup of violets. Decomposition of this salt takes place under circumstances of complicated affinities, as in the instance of the Liquor Hydrargyri oxy-muriatis, and in the aqueous solution, in which cases calomel and muriatic acid appear to be formed, and oxygene evolved. For incompatible substances, see tables at end of Vol. I. Lime-water forms with it a lotion, called *Aqua Phagedenica*. f℥ij of liquor C. to grs. ii of the salt, will produce the necessary decomposition; the precipitate is yellow.

Medical Properties and Uses. One of the most active and acrid of the metallic preparations; is an energetic stimulant and alterative, and in large quantities, a deadly corrosive poison. It may be used in cases of syphilis, in which other mercurial salts would be inadmissible. It is supposed generally to arrest the poison of this disease, more effectually than any other mercurial, while it affects less than any other, the salivary system. Hence it is the basis of all empirical remedies for venereal affections; particularly those which are promised *to cure without mercury*.* Vegetable gluten and albumen, are considered

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* Of these it may be proper to enumerate a few of the more conspicuous, into which this article enters, as an antisyphilitic, on account of its producing so much less action of the salivary glands, and thereby most effectually ending the suspicion of mercury. Gowland's lotion is a solution of sublimate imbedded in an emulsion of bitter almonds, in the proportion of about half a grain to the fluid ounce. The prussic acid present in the bitter almond, adds doubtless to the activity of this lotion. Norton's Drops, is a disguised solution of sublimate. Ward's White Drops, once esteemed as an anti-venereal and anti-scorbutic, was made in two ways, first by uniting a solution of cor. sub. with carbonate of ammonia—and secondly by dissolving mercury in nitric acid, and adding a solution of carbonate of ammonia. Spasbury's Anti-scorbutic Drops, consisted of oz. ij of sublimate; dr. i of prepared sulphuret of antimony, dr. i of orange-peel, dr. i of gentian root, and dr. i of red-saunders shavings; to these ingredients, one pint of proof spirit was added and digested into a tincture. Scheel analysed the Amsterdam Anti-venereal drops, of great celebrity, and found them to consist of muriat of iron, and a small portion of sublimate. Marsden's Antiscorbutic Drops, was a solution of sublimate in an infusion of gentian. The basis of Green's Drops is the same salt, and Solomon's Anti-impetigines, is a solution of the same. The celebrated French "Rob antisyphilitic, of Laffecteur," contains the corrosive sublimate as a chief in-

antidotes to the poisonous effects of this salt. Dose from one-eighth to one-half gr.

OFFIC. PREP. *Pil-Hydrargyri oxy-muriatis*, U. S.

Formulæ—

No. 1. ℞ Hydrargyri oxy-muriatis,
Ammoniæ muriatis, āā grs. v.
Aquæ distillatæ, f℥ss
Glycerrhizæ rad. contrit. ℈iv.
Mellis, ℥ss.

Make into 40 pills, of which one may be taken 3 times a day, in venereal cases. Each pill contains the 8th part of a grain of corrosive sublimate.

No. 2. ℞ Hydrargyri oxy-muriatis, grs. ii.
Spiritus tenuioris, f℥iv.

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gredient: a strong decoction of Arundo Phragmitis (the bird-rush,) is made, with the addition of sarsaparilla and anise seeds towards the end, which is evaporated into a rob, or syrup, to which the mercurial salt is added. Syrop de Cuisinière, consists of decoctions of sarsaparilla, burrage flowers, (borago officinalis,) white roses, senna, and aniseed, to which subimate is then added, and the whole made into a rob or syrup, by means of honey and sugar. Terre foliée mercurielle, of Poisavin, is baptarized mercury, made by boiling the oxide of mercury, which had been previously obtained by precipitating it from a nitric solution, along with cream of tartar. Velno's Vegetable Syrup, is another of these secret preparations, the actual composition of which has not, as yet, been divulged; but it seems highly probable, by Brodie's experiments, to consist simply of subimate rubbed up with honey and mucilage. This gentleman communicated to Dr. Paris, the following formula of a medicine perfectly analogous to Velno's preparation, in its sensible characters and medicinal effects, and it is stated, that wherever it has been tried, its effects are in every respect identical to those produced by the genuine nostrum. Young and fresh sliced burdock-root, (Arctium-lappa) oz. ij. Dandelion (Leon-taraxacum) root oz. i, fresh spear-mint, (m. viridis) oz. i, senna leaves, bruised coriander seeds, fresh liquorice root, of each dr. iss; water one pint and an half, to be gently boiled till reduced to one pint; to be strained, and when cold, add lib. of lump sugar, and boil it to the consistence of a syrup, and then add a small proportion of the sublimated corrosive subimate. In the opinion of Swediaur, volatile alkali enters into this nostrum as an ingredient, an article which Dr. Peyrilhe has proposed as a substitute for mercury. This alkali constitutes the active ingredient in the Tinctura Antisyphilitica of Mr. Bresnard, the king of Bavaria's physician. These preparations, which have all, in their turn, obtained great notoriety and commendation, are sufficient to show the antisyphilitic powers of the subimate, to which may be added the panacea of a noted man in our own city, whose preparation, occasionally, is varied, to suit either syphilitic taint or scorbutic disease, and my own opinion of this article, grounded on close observation of its effects, is, that its active ingredient is corrosive subimate, imbedded and disguised in a mass of mucilage and syrup, with perhaps some warm stimulating vegetable decoction, which acts upon the skin. I believe it to be no better, than any of the preceding drugs, but that it is bolstered up by the all powerful influences of fashion and empirical vaunting, acting on the credulity and prepossessions of the vulgar; and I wish I could, for the honour of the profession, stop here; but, I must add, sustained in the estimation of intelligent classes, by the most flagrant violation of the dignity of a physician's duty to himself, the public, and his profession, which ever disgraced the annals of our science. I need not say, I allude to the public testimonials of medical men, high in office, and previously to those acts, much higher in the view of their medical brethren, which have forced an unknown and empirical nostrum, in possession of a man not bred to physic, on the whole community, as a panacea—a name, in itself, implying a cure for every disease and disorder. It has done an infinite deal of mischief, and is known to have salivated, proving that it contains a mercurial salt.

Make a solution—half an ounce to be taken morning and evening, in decoction of sarsaparilla, for venereal cases.

No. 3. ℞ Hydrargyri oxy-muriatis, grs. iij. ℈
Sp. Vini rectificat. f℥j. ℨ

Make a solution.

This is Mr. Addington's prescription for gonorrhœa; one half of the solution is to be taken at bed time; it produces, he says, an immediate salivation, which continues an hour or more—salts are given the succeeding day, and the residue of the solution at night, followed on the morning by another saline cathartic, which, according to his plan, completes the cure.

No. 318.—Hydrargyri sub-murias. L. *Sub-murias Hydrargyri-sublimatum.* D. *Sub-murias Hydrargyri mitis.* E. Called Calomel.

Cabinet specimen, Jeff. Coll. No. 362 and 363.

This preparation of mercury, has been known in pharmacy for more than two centuries, under various names, expressive of some real or fancied virtue of the medicine, such as, *Draco mitigatus; Aquila alba; Aquila mitigata; Manna metallorum; Panchymagogum minerale; Panchymagogus quercetanus; Sublimatum dulce; Mercurius dulcis sublimatus; Calomelas.* It has been said by Dr. Paris, with reason, that of these various names, there is not one so inappropriate or inconsistent with any of the prevaling opinions of chemistry, in relation to its components, as that at present adopted by the colleges; whether muriatic acid be considered as a simple body, or the views of *chlorine* now generally adopted, be assumed. If we regard calomel as a compound of muriatic acid, and oxyd of mercury, it is not a sub-muriate, but equally as much a muriate as corrosive sublimate; the only difference depending on the degree of oxidizement of the mercury, which is at its *minimum* in calomel and at its *maximum* in corrosive sublimate. Consistent with the new views of chlorine, calomel must consist of one proportional of chlorine, with one proportional of metal, and is therefore a chloride of mercury. According to the Codex Med. Paris, "*Protochloruretum Hydrargyri.*"

It is sometimes impure, containing No. 317. This may be detected, by a precipitation induced by carbonate of potass, from a solution made by boiling the suspected sample, with a little muriate of ammonia, in distilled water; calomel ought, when rubbed with pure ammonia, to become intensely black, and exhibit no trace of orange colour.

Cabinet specimen, Jeff. Coll. No. 364.

Howard's or Jewel's Hydro-sublimate, (called *Howard's Patent Calomel,*) is prepared by causing the salt, in the act of sublimation, to be exposed to aqueous vapour, and be received in water. It is in a state of very minute division: is lighter than common calomel in the proportion of 3 to 5, and cannot contain any of No. 317. The preparation in the French code according to the following title, is similar to the Hydro-sublimate, viz. "Murias Mercurii dulcis mediante aqua subtilissime divisus, *juxta methodum Josia Jewel.*"—This calomel is preferable to the common. The calomel of Riverius, was a compound of Hydrarg. submur. ℈i. and scammony, grs. vii.*

For incompatible substances, see tables at end of Vol. I.

Medical Properties and Uses. The most extensively useful, and most generally employed mercurial of the whole list, and one of the most important remedies of the Materia Medica—is a universal stimulant—sialagogue, cathartic, alterative, diuretic, diaphoretic; and produces a multifarious series of beneficial operations on the system. It is consequently capable of doing infinite mischief, in careless hands; and should no more be prescribed in domestic practice, without medical advice, as is very commonly done, than arsenic. From the nursery, it should be driven by every mother who regards the health, the constitution, nay, the life of her offspring—like fire and water, it is a good servant, but a bad master. I am one of those of the profession, who believe it too much prescribed for children, and especially infants—it is irritating to the bowels, in many cases—in the lectures, I shall enlarge on this point. Calomel is adequate to cure syphilis, in any form, under a judicious management. It gives force to mild, and moderates the drastic hypercatharsis of the resinous purgatives—it may be managed, so as to prove febrifuge—in croup, little safety can be expected without it——in all diseases depending on hepatic obstruction and derange-

* Calomel is the active ingredient in numerous nostrums, in which it is chiefly combined with scammony, gamboge, jalap, and other drastic purgatives. The worm-lozenges, or worm cakes, contain them, and are pernicious from the inequality of distribution of the mercurial in the different cakes; some containing an under and some an excessive dose. Paris thinks the sugar and gum of which they are composed, add, by generating an acid, and by being kept in damp places, to the acrimony of the mercurial. The white pancea of mercury, is calomel washed in spirit of wine. Ching's worm lozenges, which are yellow, to be taken in the evening, and brown to be taken the succeeding morning, contain, the yellow, oz ss saffron, boiled in ℔j water and strained—to which ℔ss white pancea of mercury, ℔ss white sugar, and as much mucilage of tragacanth as may be sufficient to make a mass: these are rolled, and cut so that each lozenge may contain ½ grain of the pancea. The brown contain, pancea oz. vij, resin of jalap ℔ss, white sugar ℔ x; mucilage of tragacanth, q. s.; each lozenge should contain half a grain pancea. Story's worm cakes, are calomel and jalap made into cakes, and coloured with cinnabar.

ment, it is highly beneficial. In diseases of the alimentary canal, it requires more caution, I think, than it generally commands. Many of these are better assailed by the blue pill. In large doses, calomel is one of the most efficient purgatives we possess; it is a scavenger—gathering up all refuse and offending matters from the main courses and the by-ways of the system—scraping them into a heap, and expurgating them from the bowels. The subject is too copious, to permit more than these outlines; but will be considered in the lectures, with the time and attention it merits and requires.

Dose, as an alterative, from gr. ss to gr. i night and morning—as a purgative, grs. iij to grs. x, grs. xv—or, according to the practice of the East, ℈j—should only be given in pill—and to children, mixed with brown sugar, or spread on a small piece of bread and butter.

Offic. Prep. *Pil. Hydrargyri sub-muriatis.* L. & U. S.

Formulæ—

No. 1. ℞ Extract. Colocynth. comp. grs. xxiv
Pil. Aloes cum Myrrha, ℥j
Hydrargyri sub-muriatis, grs. xv
Made into 20 pills—one or two *pro re nata.*—Cathartic.

No. 2. ℞ Hydrargyri sub-muriatis, gr. x
Pil. Cambogiæ comp. et
Extract. Colocynth. comp. āā grs. xv
Syrup. Zingiberis, q. s.
Make 12 pills, of which two may be taken going to bed, or early in the morning, to excite the bowels to a regular healthy function.

No. 3. ℞ Pulveris Antimon. ℈ss
Opii Pulv. ℈ss
Hydrargyri sub-muriatis, grs. v
Confectionis Opii, q. s.
Make 10 pills—one is a dose, going to bed, which may be repeated *pro re nata.*

No. 4. ℞ Cambogiæ, grs. viij
Hydrargyri sub-muriatis, grs. v
Mucilag. Acaciæ. q. s.
Make a bolus—to be taken in the morning, against *Tænia.*

No. 5. ℞ Hydrargyri sub-muriatis, grs. iij
Pulveris Jalapæ, grs. x
Mucilaginis Acaciæ, q. s.
Make 3 pills—to empty the bowels, in bilious complaints.

No. 6. ℞ Pulveris digitalis, grs. xij
Hydrargyri sub-muriatis, grs. iv
Opii, grs. iv
Confectionis rosæ, q. s.

Make 12 pills, one every eighth hour—diuretic in hydrothorax and ascites, depending on visceral obstruction.

No. 7. ℞ Hydrargyri sub-muriatis, ℥ss
Pulveris Scillæ, grs. xv
Confectionis rosæ, q. s.

Make 15 pills—one every eighth hour, in ascites and hydrothorax—diuretic—alterative. If too aperient, add opium, 4 grains, to the formula.

No. 8. ℞ Cerati simplicis, ℥j
Hydrargyri sub-muriatis, ℥ss—℥j

Make an ointment for erysipelas, and slight cutaneous affections.

Lime-water and calomel, make the black wash, for venereal phagedenic ulcerations—it requires to be shaken when used, unless suspended by a little mucilage.

No. 319.—Hyoscyamus niger. Common Henbane.

Cl. 5. Ord. 1. *Pentandria Monogynia.* Nat. ord. *Luridæ*, Linn. *Solaneæ*, Juss.

Officinal. *Hyoscyami folia et semina.* L. *Hyoscyami nigri; herba; semina.* E. *Hyoscyamus; Herba* Dub. The leaves and seeds of Henbane. *Hyoscyamus niger; planta.* U. S. Henbane, the plant.

Cabinet specimens, Jeff. Coll. Nos. 365 and 366—figure of the plant, No. 367.

Native of Europe—whole plant covered with soft white pubescence—feels clammy, and slightly adhesive—is poisonous, if eaten.

Qualities. Odour strong, fetid, repulsive, and narcotic—taste mucilaginous, slightly acrid: when dried, destitute of odour, or taste. Watery infusion pale-yellow, insipid—but possessing the narcotic odour of the plant; it is not altered by acids—alkalies change the colour, which acids restore. Virtues entirely taken up by diluted alcohol. Henbane contains resin, mucus, extractive, gallic acid, and hyoscyamine—on the latter, the peculiar virtues and poisonous property of the herb depend.

Medical Properties and Uses. Narcotic—similar in operation to opium. In over doses, occasions sickness, stupor, dimness of sight, hard pulse, delirium, coma, dilatation of the pupils—the pulse gradually becoming weak and tremulous—petechiæ supervene, and finally death

occurs. Dissections have shown the stomach, bowels, and cerebral membranes, to have been inflamed. Its anodyne effects were known to the ancients—restored to Materia Medica, by Stoerck—may be used, where opium is indicated; and assuages pain and morbid irritability, where opium will not. It is smoked, like tobacco, for toothache. Dropped into the eye, dilates the pupil, like Belladonna—used only in extract and tincture; and externally, by inhalation, and in cataplasm. Dose, of leaves and seeds, and of extract, grs. v to ℈j—of tincture, ♏x to f℥j.

OFFIC. PREP. *Extractum hyoscyami*, and *Tinct. hyoscyami*. L. E. D. & U. S.

Formula— ℞ Pulveris digitalis, grs. iv
Camphoræ, grs. xij
Extract. Hyoscyami, grs. xviij

Make into 12 pills—3 every night, in maniacal and spasmodic affections.

HYOSCYAMUS ALBUS,
——— AUREUS,
——— PHYSALIOIDES,
——— SCOPOLIA,
} Are all poisonous plants—see Orfila's Toxicol.

No. 320.—HYOSCYAMA. *Hyoscyamine.*

Cabinet specimen, Jeff. Coll. No 368.

An alkaline salt, being the proximate deleterious principle of No. 319—discovered in the seeds, by M. Brande. His analysis of them yielded—

1. Fixed oil, readily soluble in spirit of wine, 19.6.
2. Fixed oil, difficultly soluble in spirit of wine, 4.6.
3. Fatty substance, analogous to cetine, 1.4.
4. **Malate of hyoscyama, with** malates of lime and magnesia, and an ammoniacal salt, 6.3
5. Incrystallizable sugar, a trace.
6. Gum, 1.2.
7. Bassorine, 2.4.
8. Fecule, 1.5.
9. Woody fibre, 26.
10. Phytocollc, 3.4.
11. Soluble albumen, 0.8.
12. Hard albumen, 3.7.
13. Malate, sulphate, (?) and phosphate of potass, 0.4.
14. Malate of Lime, 0.4.
15. Malate of magnesia, 0.2.
16. Phosphates of lime and magnesia, 2.1.
17. Water, 24.1.
18. Excess, 1.4.

The ashes contained carbonate, phosphate, sulphate (?) and hydrochlorate of potass; carbonate, and much phosphate of lime; much silica, manganese and iron, and a very little copper! Can all these products arise from the component materials of the seeds? Do the chemical analyzing agents and cuppels afford any of them? Let Professor Green and Professor Hare answer.

Hyoscyama has not been applied to medicine—it is strongly recommended as the subject of an inaugural thesis.

No. 321.—Hyssopus officinalis.

Officinal. *Hyssopi officinalis herba.* Edin. *Hyssopus, folia.* D. The herbaceous part of the leaves of Hyssop.

Cabinet specimen, Jeff Coll. No. 369—figure of the plant, No. 370.

An aromatic stimulating tonic, containing a volatile oil—not used any where but in Germany, by physicians—but much employed in domestic practice.

I & J.

No. 322.—Jalapæ Radix. Jalap root. See No. 186.

JALAPIA—Jalapine. See the same.

No. 323.—Jatropha.

Cl. 22. Ord. 1. *Monœcia Monodelphia.* Nat. ord. *Tricoccæ.*

Two species—1. *Jatropha manihot.*

2. ——— *curcas.*

The first yields Tapioca, a restorative dietetic—called also *Cassava—Manioc—Manihot.*

Cabinet specimens, Jeff. Coll. Nos. 371 and 372—called Pearl Tapioca.

Tapioca is nutritious. It is originally a virulent poison: but by heat, and frequent washing of its grated portions, it becomes a bland, harmless, and mild article. It is a native of South America, and of some of the West India islands. The roots are peeled and pressed, and the juice poured out is a deadly poison, used by the Indians for poisoning their arrows. It deposites, however, a white substance, which, when subjected to heat and ablutions, as mentioned above, produces a white starch—when this is dried, it is used in the preparation of bread.

No. 324.—Jatropha Curcas. (Linn.) Angular-leaved physic-nut.

Leaves rubifacient—seeds purgative, uncertain in operation.

sometimes exciting vomiting. Divested of the pellicle, 2 or 3 seeds make a dose. According to Pelletier, consist of a fixed oil and an acid principle, which is poisonous, called *Acide Jatrophique*. The expressed oil of seeds used in herpetic affections and itch, in India—diluted, in chronic rheumatism—also used for burning in lamps; and the varnish used by the Chinese for covering boxes, &c. is made by boiling this oil with oxide of iron.

Orfila places the seeds among his poisons. Mr. Lunan says, an ointment prepared with the milk of physic-nut, and half the quantity of melted hog's lard, is an excellent application in cases of indurated and inflamed piles.

No. 325.—Ichthyocolla. Isinglass. Fish-glue.—

See No. 26.

No. 326.—Infusa. Infusions, of the Colleges.

These are watery solutions of vegetables, obtained by maceration in either cold or hot water, without coction. They should be preferred to decoctions, where the medicinal virtues reside in a volatile oil, or in principles easily soluble. The temperature must be varied according to circumstances—infusions made in cold water are more grateful, but for the most part less active. The duration of the infusion depends on the nature of the substance subjected to it. They are all liable to decomposition, when kept.

Unless the dose should be otherwise stated, it is about $f\bar{3}j$ to $f\bar{3}ij$. The pharmacopeias divide simple and compound infusions. The chief simple are—*Infusum Anthemidis. I. Calumbæ. I. Caryophyllorum. I. Cascarillæ. I. Cinchonæ. I. Cuspariæ. I. Digitalis. I. Lini. I. Quassiæ. I. Rhei. I. Simarubæ. I. Tabaci.* The compound are—*Infusum Armoraciæ comp. I. Aurantii comp. I. Catechu comp. I. Gentianæ comp. I. Rosæ comp. I. Sennæ comp.*

No. 327.—Inula Helenium. Elecampane.

Officinal. *Helenium.* Lond. *Enula Campana; radix.* Dub. Elecampane root.

Cabinet specimen, Jeff. Coll. No. 573—figure of the plant, No. 574.

Slightly aromatic tonic—supposed an expectorant. Dose, ℈j to ʒj. Not used in U. States, except in domestic practice. Said to destroy the propensity to spirituous drinking, by rendering the taste of liquor disgusting—if it does this, it is worth its weight in gold, and should be prescribed every hour.

No. 328.—Inulia. Inuline.

Cabinet specimen, Jeff. Coll. No. 375.

Obtained from the preceding—is a white powder, which does not dissolve in cold water or alcohol—soluble in boiling water, forming a mucilaginous solution, but precipitates as the solution cools. Treated with nitric acid, it yields malic and oxalic acids. Is found in the list of products given to the analysis of the chemist, in some of the plants noticed in these Outlines.

No. 329.—Iodina. Iodine. See No. 275.

No. 330.—Ipecacuanha. Called also Ipecac.

Cabinet specimens, Jeff. Coll. Nos. 376 and 377.

The following plants, or their roots, are called Ipecacuan, in South America. The term, indeed, generally implies, vomiting-root.

1. *Viola parviflora.*
2. —— *ipecacuanha.*
3. —— *calceolaria.*
4. *Cynanchum ipecacuanha*
5. —— *tomentosum.*
6. *Asclepias curassavica.*
7. *Euphorbia ipecacuanha.*
8. *Dortensia Brasiliensis.*
9. —— *trifolia.*
10. *Viola Ibomboa.*
11. *Callicoca ipecacuanha.*
    Cephaelis emetica
    —— *ipecacuanha.*
12. *Psychotria emetica.*

In St. Domingo, several species of Ruellia, which produce vomiting, are named False Ipecacuan. In the U. States, several plants are called American Ipecacuanha—among which are *Gillenia trifoliata*, or Indian physic; and *Euphorbia Ipecacuanha*, or Ipecacuanha Spurge. This last is an active emetic, and doubtless contains Emetin, in combination with other proximate principles.

Indian substitutes for Ipecacuanha—*Asclepias Vomitoria*—*Corinja Gurdumi dumetrum*—*Purplia Sylvestris.*

According to Deslongchamps, thirteen plants have emetic powers resembling those of **ipecac: the roots of 6 *Euphorbias***, those of 4 species *Narcissus*, the leaves of *Asarum Europæum*, the roots of *Plumbago Europæus*, and those of *Betonica officinalis*—the leaves of the *Asarum* he found the most decidedly emetic.

The roots of various species of *Cynanchum* have been used as emetics, in different eastern countries—such as, *C. Vomitorium*, (Lamarck:) the *C. Ipecacuanha*, (Vahl,) on the Coromandel coast; the *C. Mauritianum*, (Commerson,) at the Isle of France; and the *C. Tomentosum*, (Vahl,) of Ceylon. What is called the White Ipecacuanha of Bengal, is referred to the *C. Caryotum*, of Vahl.

Physcotria Emetica yields what is called Brown Ipecacuanha. *Viola Ipecacuanha* yields what is called White Ipecacuanha: it is milder than the false kinds, but mostly adulterated with them—it is called *Pombodia*, and *Inadium*. The species of *Viola* which are emetic, besides this, are—1. *Viola Itombou*. 2. *Viola parviflora*. 3. *Viola odorata*. The two first are used to adulterate what is incorrectly called White Ipecacuanha; and an alkaline emetic concrete is obtained from the third, allied to Emetine, and called Violine.

Callicocca Ipecacuanha, called also *Cephaelis Ipecacuanha* and *Cephaelis Emetica*, yields the variety called Grey Ipecacuanha. Brotero, however, says, that Peruvian Grey Ipecac is produced by the roots of *Physcotria Emetica*. Another species of *Physcotria*, viz. *P. herbacea*, is also an emetic root.

1. PSYCHOTRIA EMETICA,
2. CEPHAELIS EMETICA,
3. VIOLA IPECACUANHA,

} Ipecacuanha.

The three varieties.

The South American natives used Ipecacuanha before their connexion with Europeans: consequently, we do not know when they first ascertained its virtues. Piso described its uses, in his History of Brazil, as early as 1618, and first brought the roots into Europe. It was not used much by Europeans, till 1700. Le Gras, a French physician, took it to Europe in 1672. It did not attract general notice, till it was a third time introduced by a French merchant, Grenier, who brought 150 lb from Spain, in 1686; and from this quantity, trials of it were made in the Hotel Dieu, by Helvetius. He first made known its efficacy in dysentery, and received from Louis XIV. £1000 sterling for the discovery—under the patronage of Louis, it quickly found its way all over Europe.

Qualities. Roots inodorous, powder has a faint disagreeable odour; taste bitter, sub-acrid, and very nauseous—water at 212° F. takes up more than 8 parts in 20; but decoction destroys the emetic power of the root; alcohol takes up 4 parts, proof-spirit 6½—the alcoholic solution is more emetic than the watery. Used in substance, (powder,) ℈j is the full dose; but a smaller quantity may be

given with emetic effect to an adult, and a larger does no harm; produces prompt, full, and energetic emesis—disgorging the entire contents of the stomach. Best emetic for mechanical extraneous bodies swallowed accidentally, as pieces of money, &c.

When given to produce diaphoresis, in dysentery, it is combined with opium and vitriolated tartar in form of powder, called Dover's Powder—dose, 10 grains. Is used in vinous tincture, to vomit children, and added to pectoral mixtures—constitutes, in this form, part of Barton's Cough mixture, now improperly made, and called Brown or Paregoric mixture. Dose, of Wine of Ipecacuanha—for an adult, ℥j—for children, ʒj to ʒij—is a good and easy vomit, in catarrhal oppression.

In very small doses, Ipecacuanha in substance is a stimulating stomachic, increasing the energy of the digestive organs—and hence has been much used in dyspepsia. In nauseating doses, has been used in uterine and pulmonic hæmorrhages. As a sudorific, used in inflammatory rheumatism. Some persons, from idiosyncrasy, are affected with a sense of suffocation on inhaling the odour of the powder: cats are said to be affected in the same way, on smelling it. The infusion of nut-galls, given after or with Ipecacuanha, renders it inert.

The emetic properties of this root are owing to an active principle, obtained by chemical processes, called, from the Greek word ἐμέω, *vomo*, to puke—*Emetina*.

CEPHAELIS EMETICA.

Synonyms—Cephaelis Ipecacuanha.
Callicocca Ipecacuanha.

Cabinet specimen, Jeff. Coll. No. 378—figure of the plant, No. 379.

Cl. *Pentandria*. Ord. *Monogynia*. Nat. fam. of Juss. *Rubiaceæ*.

Root perennial, simple, somewhat branched, with few radicles; from 3 to 4 inches long, 2 or 3 lines thick, somewhat cylindrical, contorted, annulated with prominent and unequal rough ridges; externally brown, (burnt umber.)

Stem at base procumbent, afterwards assurgent; about 6 or 9 inches high, terete, the size of a quill; smooth, Sienna brown, leafless, and knotted at the lower part—leafy at the upper.

Inferior leaves caducous, those of the summit about eight in number, sub-sessile, opposite, spreading, ovate, acute, base attenuated, 3 or 4 inches long, 1½ broad; deep-green above; apple-green, pubescent, and veined, beneath.

Stipules short, sessile, fimbriated, amplexicaule, perishable.

Flowers in a terminal solitary capitulum, supported on a pubescent peduncle, and garnished with a four-leaved involucre.

Florets 15 to 24 in number, sessile, garnished with small bracteas.

Calyx small, 5-toothed, superior, persistent.

Corolla monopetalous, border shorter than the tube, divided into 5 ovate, acute, re-curved segments.

Filaments short, capillary, inserted into the tube of the corolla at the upper part. Anthers long, erect. Germen inferior. Style filiform. Stigmas 2, obtuse, as long as the anthers.

The germen, when mature, becomes a soft, 1-celled berry, of a reddish purple colour, changing to black, containing 2 small oval seeds.

Native of shadowy moist situations, in the forests of the provinces of Pernambuco, Bahia, Rio Janeiro, Paulensia, Mariannia, and other parts of Brazil.

Flowers in December, January, and March—berries ripe in May.

PSYCHOTRIA EMETICA. *Pentandria Monogynia.*

Cabinet specimen, Jeff. Coll. No. 380—figure of the plant, No. 381.

Roots grey rather than brown, scarcely branched, covered with a thick bark. They send forth a woody stem, about 2 feet high, div ded into simple branches, which are erect, covered with small, very dense, brown pubescence.

Leaves opposite, petiolated, acuminate, surrounded with very minute slender teeth, which give them the appearance of being ciliated; they are glabrous when old, covered beneath, when young, with minute brown pubescence; petioles pubescent, also the stipules.

Flowers small, whitish, growing in small axillary clusters, the length of the petioles. They produce little smooth oval berries, of a dark-bluish colour, containing each two oblong seeds, convex above, flat beneath.

Grows in different parts of South America—it is imported from New Grenada, under the name of *Raicilla.* (Humboldt and Bonpland.)

Offic. Prep. *Pulvis Ipecacuanhæ comp.* **L. E. D. & U. S.** *Vinum Ipecacuanhæ.* **L. E. D. & U. S.**

Ipecacuanha Lozenges—each one contains ½ gr. of ipecac

Formulæ—

No. 1. ℞ Pulveris Ipecacuanhæ, ℥ss
Antimoniæ Tartarizatis, gr. i
Tinctura Scillæ, f℥j
Aquæ distillatæ, f℥vijss

Make a mixture, which may be given in table spoonfuls, at divided doses, near or remote, as the practitioner shall desire, until vomiting takes place.

No. 2. ℞ Scillæ exsiccatæ, grs. viij
Pulveris Ipecacuanhæ, gr. v
Camphoræ, ℈j
Pulv. Antimon. grs. vj
Sacchari purificat. ℥j

Triturate into powder, and divide into four equal parts—one part to be taken twice a day, in a draught of barley water—effect, expectorant.

No. 3. ℞ Pulveris Myrrhæ, grs. xij
Pulv. Ipecacuanhæ, grs. vi
Pulv. Potassæ Nitratis, ℥ss.

Mix, and divide into 4 equal doses, of which one is to be taken every 4th hour—effect, as ℞ No. 2

No. 4. ℞ Pulveris Ipecacuanhæ, grs. ij
Pulv. Opii, gr. i
Potassæ Nitratis, grs. xvj

Make a powder, to be taken at bed-time. Diaphoretic.

No. 5. ℞ Tinctura Opii, ♏vj
Vini Ipecacuanhæ, f℥j
Aquæ puræ, f℥j
Syrup. simplicis, f℥iij
Sodæ sub-carbonatis, grs. xxiv

Let the child take a sixth part every 4th or 6th hour. Antispasmodic—*R. Pearson*—for whooping cough.

No. 6. ℞ Pulveris Ipecacuanhæ, gr. i
Pulv. Opii, gr. i
Sodæ sub-carbonatis, gr. xij

Make a powder, to be taken every 6th or 8th hour—for spasmodic asthma, or adults with whooping cough.

For incompatible substances with the subject of this No see Tables at end of Vol. I

EMETA. *Emetine.*

Cabinet specimen, Jeff. Coll. No. 382.

The proximate emetic principle, discovered by Pelletier and Magendie in ipecacuanha roots—of course existing in the roots of the different kinds, and I conjecture will be found in numerous indigenous emetics. A formula for its preparation is introduced into the Paris *codex*, as the one used by Pelletier, viz. let ℥j of the powder of ipecacuanha be macerated in ℥ij of ether, with a gentle heat, for some hours, in a distilling apparatus; let the portion remaining be triturated, and boiled, with f℥iv of alcohol, it having been previously macerated in it; filter, and let the remainder be treated with fresh portions of alcohol, as long as any thing is taken up from the root—mix these alcoholic solutions, evaporate to dryness. Let this alcoholic extract, be macerated in cold distilled water, in order that every thing soluble in that menstruum may be dissolved; filter, and evaporate to dryness: this extract is Emeta. In this state, however, it contains a small quantity of gallic acid, but so inconsiderable as not to affect its medicinal qualities.

Qualities. Transparent scales of a reddish-brown colour—nearly inodorous, of a slightly bitter, acrid, but not nauseous taste. Decomposed by a heat higher than that of boiling water; insoluble in water in any proportion, undergoing, in it, not the slightest change: deliquescent; incrystallizable; soluble in alcohol, insoluble in ether; nitric acid dissolves while it decomposes it: insensible to dilute sulphuric acid: dissolved without change, by muriatic and phosphoric acids: very soluble in acetic acid—corrosive sublimate precipitates it from its solutions; tartar emetic has no effect on it; it is precipitated by gallic acid, the infusion of galls, and acetate of lead.

Medical Properties and Uses. Emetic in a dose of one grain, or even less; taken in over-dose, decoction of galls arrests the mischief; like other emetics, occasionally operates on the bowels, and induces sleep: seems to be preferable to ipecacuanha as an emetic for children, because its taste is less offensive, and it can be more easily given.

Emeta exists in ipecacuanha, combined thus: Emeta 15, oils 2, wax 6, gum 10, starch 40, woody fibre 20. The preceding account relates to *impure emeta*, commonly, as mentioned, with gallic acid. By another process, Pelletier obtained *Emeta pure ficula*.—(Cabinet specimen, Jeff. Coll. No. 385.) This, compared to the preceding, is what brown sugar is to refined white: Pelletier says, it is a vegetable alkali, being the isolated principle of ipecacuanha. It is white, pulverulent, and unalterable

by the atmosphere; scarcely soluble in water, but readily in ether and alcohol. Taste, slightly bitter; restores the blue of turnsole, which has been rubified by acids; is dissolved by all the acids, the acidity of which it lessens; resembles Veratria, in forming crystallizable saline combinations with acids; may be precipitated from these, by galls, like the alkalies of the different species of cinchona: action similar to coloured emeta, but more energetic.

No. 331.—Ipo toxicana.

The milky juice of the Antiaris toxicana. Upas antiar—used to poison arrows, and barbs.

No. 332.—Iris. Iris or flag—*Fleur de luce.*

Cl. 3. Ord. 1. *Triandria Monogynia.* Nat. ord. *Ensatæ*, Linn. *Iridæ*, Juss.

Six species—

1. *Iris Florentina, Radix*—of the Colleges—Orris root.
Cabinet specimen, Jeff. Coll. No. 384—figure of the plant, No. 385.

An errhine—a masticatory for dentition, and a fragrant aromatic, used in dentifrices.

2. *Iris pseudacorus.* Yellow water-flag.
Cabinet specimen, Jeff. Coll. No. 386—figure of the plant, No. 387.

Root a drastic purgative—the seeds, roasted, are a succedaneum for coffee.

3. *Iris Germanica.* Common fleur de luce.
Fresh root, hydragogue.

4. *Iris versicolor.* Phar. U. S. Radix. Root, hydragogue.

5. *Iris tuberosa.* Root purgative—has been considered the *hermaductyls.*

6. *Iris Virginica*—and several other indigenous species deserve an inaugural dissertation.

No. 333.—Juglans cinerea. Butter-nut.

Officinal. *Liber Radicis.* The inner bark of the root. Pharm. U. S.

Cabinet specimens, Jeff. Coll. Nos. 388 and 389—figure, No. 390.

An indigenous tree, well known. The bark above, should be gathered in May or June.

Qualities. Boiling water extracts its virtues—and by evaporation yields the extract designated in the Pharm. U. S. and in Ives's edition of Paris's Pharm. It is this extract which is used in medicine.

Medical Properties and Uses. An excellent cathartic, if well prepared. Dr. A. W. Ives observes, that "much of that sold in the shops, is manufactured in the interior of the country," (the Eastern states,) "by boiling not only the bark of the limbs and branches of the tree, instead of the bark of the roots, but the limbs and branches also, without regard to the season of the year in which they are gathered; that it is also sometimes boiled too rapidly, and burnt in the process of evaporation, and thus rendered excessively bitter, and nearly, or quite inert." The cabinet specimen, No. 391, I received from the late Dr. Barton;—it is still good. I have used this cathartic often, and deem it a mild, agreeable and effectual one; not griping like rhubarb. Dose, ℈i to ℥ss.

No. 334.—Juniperus.

Cl. 22. Ord. 13. *Diœcia Monadelphia.* Nat. Ord. *Coniferæ.*

Three species—

1. *Juniperus Sabina.* Common savin.
2. ——— *Communis.* Common juniper.
3. ——— *Virginiana.* Red-cedar.

No. 335.—Juniperus Sabina.

Cabinet specimens, Jeff. Coll. No. 392 and No. 393—figure of the plant, No. 394.

Officinal. *Sabinæ folia.* Lond. *Juniperi sabinæ folia.* Edin. *Sabina, folia.* Dub. Savin leaves.

A small shrub, about 3, or 3½ feet high; native of Europe and the Levant, cultivated in the gardens of the U. States.

Qualities. The leaves and tops have a strong, heavy, peculiar odour; a bitter, hot, acrimonious taste; yield an essential oil, considered as an abortive, as well as the leaves.

Medical Properties and Uses. Internally, I know nothing it is good for; externally, is an escharotic; united with some mineral salt, is very efficacious in removing venereal warts; combined with ointments, to keep up a continued blister after flies.

Offic. Prep. *Oleum volatile, Juniperæ Sabinæ.* E. D. & U. S. *Extractum Sabinæ.* D. (what can this be for?) *Ceratum Sabinæ.* L. & U. S.

No. 336.—Juniperus communis.

Cabinet specimens, Jeff. Coll. Nos. 395 and 396—figure of the plant, No. 397.

Officinal. *Juniperi Baccæ et cacuminæ.* Lond. *Juniperi communis baccæ.* Edin. *Juniperus, baccæ.* Dub. Juniper berries—*Juniperus communis, Baccæ.* U. S.

A tree indigenous as well as foreign; berries diuretic; seldom used: they fall into the waters of the dismal swamp, of N. Carolina, which they impregnate with some of their virtue; and colour it like strong brandy and water; is said to be tonic and stomachic. The spirit distilled from the berries is called *Hollands*, is a well known diuretic, and the worst sort is swilled by the common people, in this and other countries, till they are perpetually dribbling away their urine, their constitutions, their senses, and their lives.

Offic. Prep. *Oleum Juniperi.* L. E. D. & U. S. *Spiritus Juniperi compositus.* L. E. D. & U. S.

No. 337.—Juniperus Virginiana. Red cedar tree.

Cabinet specimens, Jeff. Coll. No. 398 and 399—figure of the tree, No. 400.

Officinal. *Folia.* The leaves. Pharm. U. S.

Externally used like savin; for which it is almost universally substituted in this city, in the shops, and called and sold for, savin; the latter being scarce, and dear. For a detailed account, see Bigelow's Med. Botany. The subject is far from exhausted, and would be a good one for an inaugural thesis; comparative experiments of its power, with savin, should be made.

Offic. Prep. *Ceratum Juniperi Virginiani.* Pharm. U. S.

No. 338.—Justicia Paniculata. (Vahl.) Creyat root.

Cl. *Diandria.* Ord. *Monogynia.* Nat. Ord. *Personatæ*, Linn.

First taken to the southern part of the Indian peninsula, from the Isle of France, where it is prized as a stomachic and tonic, and forms the basis of the famous French bitter tincture, called *Drogue Amere.* It is, according to Dr Flemming, a native of Bengal also. The whole plant is used in Materia Medica—is intensely bitter, yielding this quality to aqueous, vinous, and spirituous menstrua; it is the *cura contirum* of Rheed. Stem 18 inches high, stiff and 4-cornered; capsules flat, compressed, the same breadth from end to end; by which peculiarity, according to Vahl, it may be distinguished from all the other species of the genus.

K.

No. 339.—Kina. Quina—Quinine. See No. 169.

KINO—The product of *Pterocarpus erinacea.* Which see

No. 340.—Kæmpferia rotunda.

Yields the camphoraceous aromatic root, called Zedoary—Zerumbet of the East Indies; it is called in India, Risagon-cassamuner, and was supposed by Bergius, to be the root of amomum zerumbet.

Cabinet specimen, Jeff. Coll. No. 401—figure of the plant, No. 402.

KÆMPFERIA GALANGA. (2d species.) Root called great galangale; small galangale being the roots of Maranta galanga. (Grey.)

No. 341.—Krameria triandra.

Cl. 4. Ord. 1. *Tetrandria monogynia.* Nat. Ord. *Rosaceæ*

Officinal. *Krameriæ radix.* Lond. *Krameria* or Rathany root.

Cabinet specimen, Jeff. Coll. No. 403 and No. 404—figure of the plant, No. 405.

A small plant, with a large branched red-brown root; native of Peru, growing on the argillaceous, sandy, arid acclivities of mountains, in the provinces of Huanuco, Tarma, Canta, Xauxa, Caxtumbo, and Huamalies; very abundantly, near the city of Huanuco; and was found by Humboldt, in the province of Guancabunda—flowers throughout the year, but is in perfection in October and November. My friend, General Cortes, from whom I have received much information, respecting the plants of Peru, of which he is a distinguished native and warrior, has informed me, it often attains perfection on the arid hills, when only a foot or 14 inches high.

Qualities. The bark of the root is bitter, astringent, at first nauseous; but finally leaving the impression of sweetness and great astringency. The woody centre, is in great proportion, and is nearly insipid, and medicinally inert. Yields its properties to boiling water, which it renders very astringent and bitter, and tinges of a dark-claret colour. The mineral acids precipitate it from its infusion; but the vegetable acids do not. Pure alkalies only brighten the colour to a bright-claret hue; lime water precipitates a pink deposition, soluble in muriatic acid. Solution of sulphate of iron, strikes a black colour with the infusion. Solution of acetate throws down a pale brown precipitate, leaving the fluid nearly limpid and colourless; solution of iodine, throws down a fawn-coloured precipitate; alcohol produces no effect; solution of isinglass separates tannin: (*Thompson.*) Vogel found in 100 parts of the root, 10.00 of a peculiar principle, 1.50 mucilage 0.50 starch, 48.00 fibrin, and 10.00 of water and loss

Medical Properties and Uses. Intensely astringent—long used on this account in Peru, and is employed to cure diarrhœas, which General Cortes informed me, it effectually does. It is there used to check bloody stools in dysentery; and as a general styptic, for many purposes, even hæmorrhages; also to heal spongy gums. According to Alibert, it has cured leucorrhœa in France. It is used in England in the manufacture of port-wine. May be exhibited in substance, in extract, which is a beautiful preparation, in decoction, and infusion. Dose, in substance grs. x to ℥ss; of the infusion, made with ℥ss of the bruised root, and f℥vj of boiling water, from f℥x to f℥ij: of the decoction, made with ℥ij bruised root and 0j distilled water, from f℥j to f℥ij. Mr. A. T. Thompson says, on the continent of Europe, a tincture is made by digesting for 12 days ℥inj of the powdered root, ℥ij orange-peel, ℥ss serpentaria, ℥j saffron, and 0ij of rectified spirit of wine. I have used Rathany, in extract and in powder, very extensively in the profluviæ, in one case of passive hæmorrhage—and with success. I prefer these forms of exhibition, and can confidently recommend them.

Cabinet specimen, Jeff. Coll. figure, No. 406, is a second species—viz. *Krameria ixina.*

L.

No. 342—Lactuca.

Cl. 19. Ord. 1. *Syngenesia æqualis.* Nat. ord. *Compositæ semiflosculosæ*, Linn. *Cichoraceæ*, Juss.

Three species—

1. *Lactuca sativa.* Common garden lettuce, well known as a sallad. Yields *Lactucarium*, or lettuce opium.
2. *Lactuca virosa.* Strong scented lettuce: a narcotic and diuretic; only existing in the Pharm. of the Edinburgh College, from which they direct *succus spissatus Lactucæ virosæ.*

Cabinet specimen, Jeff. Coll. No. 407—figure of the plant, No. 408.

3. *Lactuca elongata.* Wild lettuce.

Officinal. *Planta.* The plant. Pharm. U. S. deserves investigation, by a candidate for a degree.

No. 343.—Lactucarium. The active principle of Lettuce.

Cabinet specimen, Jeff. Coll. No. 409.

Procured by inspissating the *succus proprius* of 1. No. 342 Has the colour (though somewhat a paler brown) of opium —it has also in some degree the odour and taste of it Dis

tilled water dissolves the greatest portion of it—and if the solution, which is of a deep-brown colour, be treated in the same manner as opium, Morphia is developed—on this its narcotic virtue depends. It contains besides this principle, extractive, resin and mucilage; and according to Dr. John, caoutchouc; Dr. Duncan, Sen., conceived it peculiarly well suited to allay the cough of phthisis pulmonalis. Dose, grs. i to vj, in pill—of the tincture, made with ℥j lactucarium and 0j diluted alcohol, from ♏ x to ♏ lx. (See Coxe, Trans. Am. Ph. Soc.)

No. 344.—Laurus.

Cl. 9. Ord. 1. *Enneandria Monogynia.* Nat. Ord. *Oleraceæ*, Linn. *Lauri*, Juss.

No. 345.—Laurus Cinnamomum. (Species 1st.) The Cinnamon tree.

Cabinet specimen, Jeff. Coll. No. 410 and 411—figure of the tree, No. 412.

A well known aromatic astringent.

Offic. Prep. *Aqua Cinnamomi; Spiritus Cinnamomi; Tinctura Cinnamomi; Tinctura Cinnamomi*, comp. of Colleges. *Pulvis Cinnamomi*, comp. L. E.

No. 346.—Laurus Cassia. (Species 2d.) The Cassia tree.

Officinal. *Lauri cassiæ cortex; flos nondum explicatus.* Edin. Dub. The bark, and flower-buds, of the cassia tree.

Cabinet specimen, Jeff. Coll. No. 413.

Called cassia—in commerce, resembles cinnamon, is thicker, coarser; qualities similar to those of cinnamon, but fainter

Offic. Prep. *Aqua Lauri Cassiæ distillata.* E.

No. 347.—Laurus Camphora. (Species 3d.) One of the camphoraceous vegetables. See No. 235.

Cabinet specimen, Jeff. Coll. No. 414—figure of the tree, No. 415.

No. 348.—Laurus Nobilis. (Species 4th.) Common sweet-bay.

Officinal. *Lauri baccæ et foliæ.* Lond. *Lauri nobilis folia; baccæ; oleum fixum.* Edin. Laurel berries and leaves, and the fixed oil of the berries.

Cabinet specimens, Jeff. Coll. Nos. 416 and 417—figure of the tree, No. 418.

Both leaves and berries have a sweet fragrant odour, and an aromatic astringent taste—the oil has similar but stronger sensible properties The distilled water from the leaves, called bay-water, contains hydrocyanic acid. All are narcotic and anti-hysteric. Mr. A. T. Thompson has employed bay leaves with advantage, in impetigo. Seldom used in the United States.

No. 349.—Laurus Sassafras. (Species 5th.) The Sassafras tree.

Officinal. *Sassafras; lignum et radix.* Lond. *Lauri Sassafras lignum, radix.* Edin. *Sassafras, lignum, cortex, radix.* Dub. The wood, root, and bark of Sassafras. *Laurus Sassafras, cortex radicis.* U. S. The bark of the root.

Cabinet specimen, Jeff. Col. No. 419—figure of the tree, No. 420.

Tree well known; properties stimulating, diaphoretic; the flowers are used as a tea, in their fresh state. The Pharm. U. S. rejects the wood, very properly, but the *Medulla Sassafras*, or pith, should have been added—it is found in all our shops—is stimulating, astringent, mucilaginous in infusion, and used as a collyrium in certain cases of ophthalmia—(Cab. spec. Jeff. Coll. No. 421.)

Offic. Prep. *Oleum Sassafras.* L. E. D. & U. S. *Decoctum Sarsaparillæ comp.* L. D. *Decoctum Guaiaci.* L. E. D. *Aqua calcis comp.* D.

No. 350.—Laurus Benzoin. (Species 6th.) Spice-bush.

Cabinet specimen, Jeff. Coll. No. 422—figure of the plant, No. 423.

Indigenous. For a detailed account, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. II.

No. 351.—Lavandula Spica. Lavender.

Officinal. The flowers. Plant and properties well known.

Cabinet specimen, Jeff. Coll. No. 424—figure of the plant, No. 425.

Offic. Prep. *Oleum Lavandulæ.* L. E. D. & U. S. *Spiritus Lavandulæ.* L. E. D. & U. S. *Spiritus Lavandulæ comp* L. E. D. & U. S.

No. 352.—Leontodon Taraxacum. Dandelion.

Cabinet specimen, Jeff. Coll. No. 426—figure of the plant, No. 427.

A well-known diuretic weed, the leaves and root being de

signated as officinal by the Colleges. The fresh leaves, in the spring, with the mid-rib cut out, are eaten as salad.

Offic. Prep. *Extractum Taraxaci.* L. D. Much used on the Continent of Europe, but not at all in the U. S.

No. 353.—Lichen Islandicus. (Species No. 1.) Iceland moss, or liverwort.

Officinal. *Decoctum Lichenis.* L. D.

Cabinet specimen, Jeff. Coll. No. 428—figure of the plant, No. 429.

A cryptogamous plant—is a nutritive tonic—is supposed demulcent—as I believe in no such medicines, I can only refer its affirmed efficacy in consumption, to its mucilaginous nutritive qualities.

No. 354.—Lichen Orcella. (Species No. 2.) Dyer's lichen, or Orchall.

Officinal. *Litmus; lacmus tinctorius.* Dub. Litmus.

Cabinet specimen, Jeff. Coll. No. 430.

The *Argol, or Archil,* of commerce, is prepared from it—its only use is by the chemist, in testing alkalies and acids—for which the tincture is used.

No. 355.—Linium usitatissimum. Common Flax.

The seeds used as a cataplasm, and a diluent mucilage, in catarrh, strangury, gonorrhœa, &c.

Offic. Prep. *Infusum Lini—Oleum Lini,* of the Colleges.

LINUM CATHARTICUM is the purging flax.

No. 356.—Linimenta. Liniments of the Colleges.

External applications, of the consistence of oil or balsam. With the exception of *Linimentum Ænginis,* all the officinal liniments are decomposed by the substances which are incompatible with soaps. The chief are, besides the one mentioned—*L. Ammoniæ fortius. L. Ammoniæ subcarbonatis. L. Calcis. L. Camphoræ. L. Camphoræ comp. L. Hydrargyri. L. Saponis comp. L. Terebinthinæ,* (Kentish ointment.)

No. 357.—Liquores. Pharmaceutical solutions or liquids. The chief are—

Liquor Aluminis comp. A compound of alum and sulphate of zinc.

Liquor Ammoniæ, or *Aqua Ammoniæ.* Dose, ♏x to ♏xxx.

Liquor Ammoniæ Acetatis—formerly, Spirit of Mendererus.

Formulæ—

No. 1. ℞ Misturæ Camphoræ, f℥iss
Liquor. Ammon. Acet. f℥ss
——— Antimonii tart. ♏xx
Tinct. Opii, ♏x
Make a draught. Diaphoretic.

No. 2. ℞ Liquor. Ammoniæ Acetat. f℥ij
Decoct. Cinchonæ, f℥x
Tinct. Cinchonæ, f℥ij
Confect. Aromat. ℥ss
Make a draught, to be taken every 3d or 4th hour. Diaphoretic.

No. 3. ℞ Liquoris Ammoniæ Acetat. f℥j
Potassæ Acetatis, ℥j
Make a draught, to be taken three times a day.—Diuretic.

Liquor Ammoniæ sub-carbonatis. Dose, f℥ss to f℥j.

Liquor Antimonii Tartarizati—called Antimonial wine.—Dose, ♏x to f℥j.

Liquor Arsenicalis—Fowler's Solution. Dose, ♏iv, increased to ♏xxx, twice a day. See No. 79.

Liquor Calcis. See No. 128.

Liquor Ferri Alkalina—good for nothing.

Liquor Hydrargyri oxy-muriatis. Dose, f℥ss, in a bland drink.

Liquor plumbi sub-acetas—only used externally, in superficial phlegmonic inflammation of the skin, and in herpetic affections.

Liquor Plumbi sub-acetatis dilutus—used as the preceding, being weaker.

Liquor Potassæ. Dose, ♏x to f℥ss, in veal broth.

Formula— ℞ Liquoris Potassæ, f℥j
——— Calcis, f℥vj

A table-spoonful, or two, to be taken a little before meals. Antacid and absorbent.

Offic. Prep. from this liquor, are *Potassa fusa. Potassa cum Calce. Liquor Sulphureti Kali. Antimonii Sulphuretum præcipitatum*, of the Colleges.

Liquor Potassæ sub-carbonatis. Dose, ♏x to f℥j.

Formulæ—

No. 1. ℞ Infusi Gentianæ comp. f℥j
Liquor. Potassæ sub-carb. f℥ss
Tinct. Cascarillæ, f℥j
Make a draught. Tonic

No. 2. ℞ Decoct. Cinchonæ, f℥ijss
Infus. Gentianæ, comp. f℥j
Tinct. Cascarillæ, f℥ij
Liquor Potassæ sub-carb. f℥ij

Make a mixture, of which 2 table-spoonfuls twice a day. Tonic.

No. 358.—Liriodendron Tulipifera. The Tulip tree. American Poplar.

Officinal. The bark. Phar. U. S. and Ives' ed. of Paris's Pharm.

Cabinet specimen, Jeff. Coll. No. 431—figure of the tree, No. 432.

Aromatic tonic. For a detailed account, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. I.

No. 359.—Lobelia Inflata. Indian tobacco—— Emetic weed.

Officinal. The plant. Phar. U. S. and Ives' edition Paris's Pharm.

Cabinet specimen, Jeff. Coll. No. 433—figure of the plant, No. 434.

A very important medicine—active. deleterious, useful.—For a full account, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. II.

No. 360.—Lupula. Lupuline—the active part of the hop. See No. 305.

No. 361.—Lythrum salicaria. Loose-strife, or purple willow herb.

Officinal. *Herba.* Dub.

An Irish remedy for dysentery, and strongly recommended by De Haen—is astringent and tonic. Dose, from ℈ss to ℥iv of the dried herb, in powder—of the decoction of the recent root, made by boiling ℥j in Oj water, f℥j every 3d hour.

I have followed Mr. A. T. Thompson, in introducing this plant to notice, because I think the genus an active and medicinal one. I would be glad to see our indigenous *Lythrum Verticillatum* investigated in an inaugural thesis.

No. 362.—Lycopus Virginicus, } Bugle-weed—
——— Europæus, } Water horehound

Officinal. The plant. Ives' ed. Paris's Pharm, which see, and W. P. C. Barton's Comp. Fl. Phil. Vol. I.

Cabinet specimens, Jeff. Coll. Nos. 435 and 436.

No. 363.—Lyttæ Vesicatoriæ. Spanish flies. See No. 133.

Lyttæ vittatæ. Potatoe flies. See No. 134.

M.

No. 364.—Magnolia Glauca. Glaucous-leaved Magnolia.

Officinal. *Cortex.* Phar. U. S.

Cabinet specimen, Jeff. Coll. No. 437—figure of the tree, No. 438.

An aromatic tonic. For detailed account, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. I.

The barks of the *Magnolia tripelata* and *M. acuminata*, are also aromatic tonic. Cab. spec. J. C. Nos. 439 and 440—figures, Nos. 441 and 442.

This magnificent genus, of which the United States boasts so many elegant species, is a medicinal family. Several species remain yet uninvestigated, and would form fit subjects for inquiry, in a thesis of any candidate for a degree.

No. 365.—Magnesia. L. *Magnesia Usta.* D. Calcined Magnesia.

Well known—requires 2000 times its weight of water to hold it in solution—yet assists the solubility of resins, camphor, and opium, in the same fluid; soluble in solutions of alkaline carbonates, but insoluble in those of caustic alkalies. Sir H. Davy has ascertained, that, like other alkaline earths, it is a compound of a peculiar metal, which he has called *magnesium*, and oxygen. It is therefore an oxyd. Antacid, and purgative. Dose, grs. x to ℥ss, and upwards, according to the existing state of the system—usually taken in milk or water.

Formula— ℞

Magnesiæ,	℥ss
Aquæ Menthæ pip.	f℥ij ss
Sp. Lavendulæ comp.	f℥ss
Sp. Carui.	f℥iv
Syrup. Zingiberis,	f℥ij

Mix—dose, a table-spoonful *pro re nata.* Antacid. carminative.

No. 366.—Magnesiæ Carbonas. L. & U. S. Carbonate of Magnesia, vulgo, Common Magnesia—formerly, *Magnesia alba.*

This is in solid, square, very light pieces. Medical uses, the same as the preceding. Antacid, purgative. Dose, ℈j to ℥j, or more.

Offic. Prep. *Hydrargyri cum Magnesia.* D. *Magnesia.* L. E. D.

No. 367.—Magnesiæ Sulphas. L. & U. S. *Sulphas Magnesiæ.* E. D. (*Magnesia vitriolata*—*Sal catharticum amarum.*) Bitter purging salt—Epsom salt.

One of the best saline cathartics—f℥j water dissolves ℥j—insoluble in alcohol. Dose, ℥ss to ℥ij, taken either at once, or in two or three doses.

Offic. Prep. *Enema catharticum*—*Enema fœtid.* D.

Formulæ—

No. 1. ℞ Magnesiæ sulphatis, et Sodæ sulphatis, āā ℥iij; Aquæ Menthæ viridis, f℥vss; Liquor. Antimonii tart. f℥j.

Make a mixture—2 table-spoonfuls the dose, twice a day. Cathartic.

No. 2. ℞ Magnesiæ sulphatis, et Sodæ sulphatis, āā ℥ss; Ferri sulphatis, gr. v; Misturæ Camphoræ, f℥vij ss.

Make a mixture—2 table-spoonfuls the dose, twice a day, or oftener, *pro re nata.* Cathartic.

No. 3. R Magnesiæ sulphatis, ℥vj; Infusi Sennæ, f℥iss; Tincturæ Jalapæ, f℥j; ——— Opii, ♏x; ——— Castorei, f℥j.

Make a draught, to be taken every 3d or 4th hour, for *colica pictonum.*

No. 368.—Malva. Mallow.

Cl. 16. Ord. 6. *Monadelphia Polyandria.* Nat. ord. *Columniferæ,* Linn. *Malvaceæ,* Juss.

Species 1—MALVA SYLVESTRIS. Common Mallow.

Officinal. *Malva.* Lond. *Malvæ Sylvestris herbæ; flores.* Edin. Mallow.

Cabinet specimen, Jeff. Coll. No. 443—figure of the plant, No. 444.

Species 2—MALVA ROTUNDIFOLIA. Round-leaved Mallow: (a common weed.)

Species 3—MALVA CRISPA. Curled-leaved Mallow: (leaves brought around butter.)

Species 4—MALVA ALCEA (?) Alcea.

Species 5—MALVA MOSCHATA. Musk Mallow.

All mucilaginous plants—of which the only officinal is the first, though all are used as ptisans, or, as they are erroneously denominated, demulcents.

No. 369.—MANNA. See No. 274.

No. 370.—MASTICHE. The resinous product of *Pistachia lentiscus*, which see.

No. 371.—MARANTA ARUNDINACEA.

Cl. 1. Ord. 1. *Monandria monogy.* Nat. Fam. *Cannæ*, Juss

Cabinet specimen, Jeff. Coll. No. 445—figure of the plant, No. 446.

Yields most of the well known fecula, called arrow-root—one of the best restorative dietetics, particularly for children. I think, however, it is scarcely fit to nourish infants, if their only diet.

The *maranta arundinacea*, has lately been taken to Ceylon, from the West Indies; and it thrives well—they make excellent arrow-root of it there—where a new species of it, the *M. Paniculata*, has lately been discovered, the root of which is a medicine of the natives, and termed by the Cyngalese, *git oula*. Ainslie.

An excellent kind of arrow-root is prepared in Travancore, (India,) from the root of *curcuma angustifolia*. (Roxb.) which belongs to *monandria monogyna*, and Nat. Ord. *Scitamineæ*, Linn.

Is much prized in England—where much of it is taken from the Malabar coast. Arrow-root is also obtained from potatoes, from Nos. 88 and 89, and other roots.

MARANTA GALLINGA yields the roots called lesser galangale: occasionally met with in commerce; they are said to stop vomiting effectually, but are no more than warm aromatics.

No. 372.—MARRUBIUM VULGARE. Horehound.

OFFICINAL. *Marrubium.* Lond. *Marrubii vulgaris herba* Edin. *Marrubium album; folia.* Dub. Horehound leaves *Marrubium vulgare herba.* U. S. Horehound, the herb.

Cabinet specimen, Jeff. Coll. No. 447—figure of the plant, No. 448.

A didynamous verticillate plant, well known as a common domestic remedy for catarrh; and entering into the bitter sugar, called horehound-candy. Used ad libitum in infusion.

No. 373.—Matonia cardamomum. (Smith and Roscoe.)

Synonyms—*Amomum Repens.* (Willd.)
Elletaria cardamomum. (Maton, in Tr. L. Soc.)

Dr. Maton had called the genus, furnishing the cardamom seeds, Elletaria, from *Elletari*, the Malabar name of the plant—Dr. J. Ed. Smith, suggested to name the genus in honour of Dr. Maton, which has been done by the classic poet, and excellent botanist, Mr. Roscoe of Liverpool, in his account of the *Scitamineæ*, to which the plant belongs. I have followed Paris in adopting the name, believing that Botany and Mat. Med. are indebted to the researches of Dr. Maton.

Qualities. Cardamom seeds are aromatic, grateful, warm, pungent, not heating the stomach like pepper. They consist of fecula, mucilage, and essential oil; water, alcohol, and ether, extract their virtues.

Medical Properties and Uses. Carminative and stomachic; this is the common language of Materia Medica—I would call them *aromatic*. Dose, grs. vi to ℈j. They are chiefly used to give aroma and warmth to bitters, and other preparations—entering as an ingredient for this purpose in the following:

Offic. Prep. *Extract. Colocynthydis comp.* L. D. & U. S. *Tinct. Cardamomi.* L. E. D. & U. S. *Tinct. Cardamomi comp.* L. D. *Tinct. Cinnamomi comp.* L. E. *Tinct. Gentianæ comp.* L. *Tinct. Rhei.* L. E. D. & U. S. *Tinct. Rhei cum Aloe.* E. & U. S. *Tinct. Sennæ.* L. D. *Tinct. Sennæ comp.* U. S. *Spt. Ætheris Aromat.* L. *Vinum Aloes socotrin.* E. & U. S. *Confect. Aromat.* L. & U. S. *Pulv. Cinnamomi comp.* L. E. D. *Pulvis aromaticus.* U. S. *Pil. Scilliticæ.* E. *Infusum sennæ.* Dub.

No. 374.—Medula Sassafras. Pith of Sassafras twigs. See No. 349.

No. 375.—Medula Sambuci. Pith of Elder.

Cabinet specimen, Jeff. Coll. No. 449.

No. 376.—Mel, of the colleges—Honey.

Besides the general properties of saccharine bodies, possesses others peculiar to itself, depending on the presence of an acid. For internal use, sugar is to be preferred; as honey, in some constitutions, produces gripes and colic pains; forms an excellent gargle, and facilitates the expectoration of viscid phlegm. Sometimes employed as an emollient application to abscesses, and as a detergent to ulcers. It is

preferable to sugar in forming electuaries—and is not so apt to crystallize. The best honey, is that freest from colour, and contains the largest grains when it concretes. For medical use, it should also be as free from flavour as possible. That obtained from young bees is the purest, and is called virgin honey. When separated from the wax, by expression, it is less pure—and there is another sort, still inferior, obtained by heating the combs, before they are put in press. Honey consists principally of sugar, but also contains mucilage, wax, and acid—and is often impregnated with the essential oil of the flowers, from which the bees have gathered it, as in the perfumed honey of the Crimea. Asia and America yield poisonous honey. Newman exsiccated honey in the water bath; the vapour took fire from a candle, and exhaled its odour widely. The liquor was also impregnated with it. Dissolved in water, it undergoes vinous fermentation—forming mead. Clarified honey (*Mel despumatum.* U. S. & L. D.) has not the agreeable smell of crude honey; it does not ferment readily, nor does it gripe.

Offic. Prep. (Called *Mellita.*) *Mel Boracis.* L. *Mel Rosæ.* L. D. *Oxymel.* L. D. *Oxymel Colchici.* E. *Oxymel Scillæ.* L. D. *Mel scillæ comp.* U. S. *Mel scillæ acetatum.* U. S

No. 377.—Melaleuca Cajuputi.

Synonyms—Melaleuca leucadendron. (Wood.)
Cajuputi Melaleuca. (Rumphius.)

Officinal. *Cajuputi oleum.* Lond. *Melaleucæ Leucadendri, oleum volatile.* Edin. *Oleum Cajuputi.* Dub. Cajuputi oil.

Cabinet specimen, Jeff. Coll. No. 450—figure of the plant. No. 451.

A small tree, native of Amboyna, and the south part of Borneo. It is called Cajuputa in the Malay language: and by the natives *Daun Kitsjil,* and *Cajuputi.* The oil is prepared from the leaves, by distillation—it is said to be limpid and pellucid when first drawn, and that the green colour is derived from copper flasks in which it is kept.

Qualities. Taste pungent and camphoraceous; very volatile, burns rapidly without residuum. Soluble in alcohol and partially in water. Dropped on pure water, it gradually spreads itself over the surface, and soon entirely evaporates; this is a test of its purity.

Medical Properties and Uses. Diffusible, stimulant, antispasmodic, and diaphoretic. Given in dropsy, chronic rheumatism, palsy, hysteria, flatulent colic, and all nervous affections. Dropped into a carious tooth, it assuages pain—internally taken, does the same. Mr. A. T Thompson says, he has seen much benefit from rubbing it on the

temples, in defective vision from weak eyes. I have had much experience with this fluid, as an antispasmodic, particularly for hysteria; and for eructation, and hiccough, in prostrated hard-drinkers—and think it an invaluable medicine. *Dose*, ℥ iij to v, on a lump of loaf sugar.

No. 378.—Melissa officinalis. Common balm.

Officinal. *Melissæ officinalis folia.* Edin. Balm leaves.

Cabinet specimen, Jeff. Coll. No. 452—figure of the plant, No. 453.

A didynamous verticillate plant, used in making the well known ptisan—given generally warm to induce diaphoresis.

No. 379.—Mentha viridis. L. & U. S.

Synonym—Mentha sativa. Dub.

Cabinet specimen, Jeff. Coll. Nos. 454 and 455—figure of the plant, No. 456.

Officinal. *Herba.* Spear-mint—the herb; well known; yields the following:

Offic. Prep. *Aqua Menthæ virid.* L. D. *Infusum Menthæ comp.* D. *Ol. Menthæ virid.* L. D. & U. S. *Sp. Menth. virid.* L.

No. 380.—Mentha piperita. L. E. D. & U. S. Mentha piperitis. D. Pepermint.

Officinal. *Herba.* The herb.

Cabinet specimen, Jeff. Coll. Nos. 457 and 458—figure of the plant, No. 459.

Also well known, yielding the following:

Offic Prep. *Aqua menthæ Piperit.* L. E. D. & U. S. *Spir. menthæ pip.* L. D. & U. S. *Oleum menthæ pip.* L. D. & U. S.

The genus is didynamous and verticillate—doubtless some of the other species will yield an essential oil. These plants are important adjuvants to practice in infusion, or by their essential oils. The colic of babies will seldom resist mint-water.

No. 381.—Menispermum. Moonseed.

Synonym—Cocculus. (Decandolle.)

Cl. 22. Ord. 10. *Dioecia Icosandria.* Nat. Ord. *Menispermæ.*

2 Species—

1. *Menispermum Calumba.* (Roxburgh.)

Synonyms—*Menispermum palmatum.* (Willd.)
Cocculus palmatus. (Decandolle.)

2. *M Cocculus.*

Synonyms—*Cocculus indicus.* (Decandolle.)

Menispermum Calumba.

Species 1.—MENISPERMUM CALUMBA.

Officinal. *Calumba.* Lond. *Columbæ Radix.* Edin. *Columbo Radix.* Dub. Calumba root.

This plant, is not a native of Columbo in Ceylon, as was long supposed—the proper Mosambique name, *Kalumb*, having been mistaken for Columbo, in Ceylon, led to the mistake. It comes from the coast of Malabar; grows abundantly wild in the thick forests, about Obis and Mosambique, on the Zanguebar coast of Africa. This discovery we owe to Mr. J. F. Fortin, a French gentleman, settled at Madras. The root of Bryonia epigea of Ruter, resembles it very much in natural qualities.

Qualities. Slight aromatic odour, intensely bitter taste—breaks with a starchy fracture, easily pulverized; water at 212°, taken up ¼ of its weight; the infusion has all the sensible properties of the root. Is supposed to contain Cinchonia; M. Planche found in it a large proportion of a peculiar *animal* substance, a yellow bitter resinous matter, and ⅛ its weight of starch; by repeated distillation, a volatile oil, and from the residue, malate of lime, and sulphate of lime.

Medical Properties and Uses. Pure bitter—tonic, without astringency, may be combined with aromatics, opiates, and alkaline or neutral salts. Dose, of the powdered root, grs. xv to ℥ss, 3 or 4 times a day; of the infusion (which soon spoils,) f℥iss to f℥ij.

Offic Prep. *Infusum Calumbæ.* L. E. &. U. S. *Tinct. Calumbæ.* L. E. D. &. U. S.

Formulæ—

No. 1. See Formula 1, of No. 263,

No. 2. ℞ Magnesiæ sub-carbonate, ℈j
Infus. Calumbæ, et
Tinct. Calumbæ, āā f℥j }

Make a draught—Antilithic.

No. 3. ℞ Infus Calumbæ, f℥vss }
Tinct Cinnamomi comp. f℥j
Syrup Aurantii, f℥j }

Make a mixture, of which a table-spoonful or two may be taken *pro re nata*, to check the vomiting of pregnancy, and to keep the bowels in tone.

Species 2.—MENISPERMUM COCCULUS. The berries called *Cocculus Indicus.* Indian cockle—Indian berries.

Cabinet specimen, Jeff. Coll. No. 460.

Used to intoxicate fish; in powder, to destroy vermin: by the brewers and publicans to render their beer intoxicating. 1 and 2 yield

PICROTOXA, (called also *Picrotoxina* and *Picrotoxia*,)—*Picrotoxine.*

Cabinet specimen, Jeff. Coll. No. 461.

The bitter deleterious proximate principle of the above, discovered by Boullay: he found the fruit to yield—

1. Fixed oil.
2. Adipocire.
3. Yellow extractive colouring matter.
4. Picrotoxine.
5. Woody fibre.
6. Albumen.
7. Menispermic acid.

The ashes contain sulphate and hydrochlorate of potass, phosphate of lime, silica, and iron.

QUALITIES. Inodorous; very bitter; restores blue turnsole rubified by acids; scarcely soluble in water, very soluble in ether and alcohol; combines with most acids, forming bitter salts, sparingly soluble in water. Orfila says, it acts on the animal economy like camphor. It has not been used in medicine—therefore presents an untouched theme for the ingenuity of some candidate for graduation.

No. 382.—MENYANTHES TRIFOLIATA. Buck-bean —Marsh Trefoil.

Cabinet specimen, Jeff. Coll. No. 462—figure of the plant, No. 463.

OFFICINAL. *Menyanthes.* L. *Menianthis trifoliatæ folia.* E. *Trifolium paludosum.* D. The leaves of Buck-bean. *Menyanthes trifoliata radix.* U. S. The root of Buck-bean.

Indigenous; grows in bogs, in Jersey, near this city. Leaves nauseous, intensely bitter; are used in England as a substitute for hops, in brewing beer.

MEDICAL PROPERTIES AND USES. Tonic, diuretic, and purgative. Used in intermittents, rheumatism, gouty affections, &c. Dose of dried leaves, in powder, ℈j to ℥j—of the infusion, made with ℥ss of the dried leaves and Oss boiling water, f℥j to f℥iss, three or four times a day. I know nothing of the virtues of the root, which is made officinal in the Phar. U. S.

No. 383.—MEZEREI CORTEX. Officinal Mezereum.

See No. 219.

Under which it should have been stated, that the root of *Daphne Gnidium* (Cab. spec. Jeff. Coll. No. 464.) called *Thymelæa* and Spurge flax, is vesicatory like Mezereum.

and has been chewed with advantage in palsy of the tongue; and that in a few grains, internally taken, it is a drastic cathartic.

No. 384.—Misturæ, of the Colleges. Mixtures.

The officinal are—1. *Mistura Ammoniaci.* 2. *M. Amygdalarum.* 3. *M. Assafœtidæ.* 4. *M. Camphoræ.* 5. *M. Cornu usti.* 6. *M. Cretæ* 7. *M. Ferri comp.* 8. *M. Moschi.*—The dose of all, f℥j to f℥ij, twice or thrice a day.

No. 385.—Momordica Elaterium. Squirting Cucumber—Wild Cucumber, (fructus) the concrete juice of the fruit.

Cl. *Monoecia.* Ord. *Monadelphia.* Nat. fam. *Cucurbitaceæ,* Juss.

Synonyms—*Cucumis Agrestis,* } Gray's Supplement.
——— *Asinimus,* }

Supposed the Ἐλατήριον of Dioscorides.

Native of the south of Europe, flowering in June and July. Introduced into England by Gerard, in 1596, and there cultivated for medical use.

The fruit, for medical use, should be gathered in September, just before it is ripe. The clear juice which runs from it, and that which is obtained by expression, form, the first the white, and the latter the black Elaterium of the shops.

Qualities. The juice is almost inodorous, and possesses a slight bitter taste. It deposits, after rest, a considerable portion of a peculiar feculent matter, combined with some very active principle, to which Paris has affixed the name *Elatine.* It is contained in the juice which surrounds the seeds alone, and subsides from this juice, without pressure having been used to obtain it. Clutterbuck only obtained 6 grains from 10 cucumbers. Paris found that 10 grains of the best Elaterium of the shops, contain only one grain of Elatine. On this peculiar principle, therefore, the activity of the medicine depends: and it has been incorrectly called an extract, which it is not.

Medical Properties and Uses. Elaterium is a powerful hydragogue, exciting sickness, severe vomiting, and hypercatharsis, if incautiously administered; seldom used as a mere cathartic; has often produced entire evacuation of the water in ascites, when gamboge, crystals of tartar, powdered digitalis, &c. have failed. Should be given in divided doses, of one-eighth of a grain each, every fourth hour, until it begins to operate. Simon Pauli, Sydenham, and Lister, recommend it in dropsies

The directions of the Dublin and London Pharmacopeias, for preparing it, are substantially the same—as follow: "Slice ripe wild cucumbers, express the juice, (strain the juice very slightly, *Dub. Pharm.*) and pass it through a fine hair sieve into a glass vessel; then set it aside for some hours, until the thicker part has subsided. Reject the supernatant thinner part, and dry the thicker part with a gentle heat."

Elaterium is often adulterated with starch, so that two samples are seldom alike in strength. To be good, it should be of a greenish-grey colour, a bitter taste, light, and pulverulent.

The Edinburgh College has strangely rejected this article from the last edition.

No. 386.—Monarda punctata. Horsemint.

Officinal. *Herba.* Phar. U. S. Also the essential oil.

Cabinet specimens, Jeff. Coll. Nos. 465 and 466.

An indigenous plant, yielding a camphoraceous essential oil.

See W. P. C. Barton's Comp. Fl. Ph. Vol. I.

No. 387.—Morphia. Morphine. An alkaline principle, procured from opium. See *Papaver.*

No. 388.—Morus nigra. Common Mulberry tree.

Officinal. *Mori baccæ.* Lond. Mulberries. The London College recognises these berries for the Offic. Prep. *Syrupus Mori.* L. Fruit and syrup laxative.

No. 389.—Moscus. Musk.

Cabinet specimen, Jeff. Coll. No. 467.

An animal secretion, obtained from a bag or sack situated between the navel and prepuce of the *Moschus Moschiferus*, an animal inhabiting the Alpine mountains of Eastern Asia, particularly of the Himālā mountains, which divide Thibet from India, where it is known by the name of *Cusseru.*

Qualities well known; is stimulant and antispasmodic, but so very dear, that it is seldom to be met with pure. Given in low fevers, in form of mixture or bolus. *Dose*, grs. vj to ʒj, repeated every 6 or 8 hours.

Offic. Prep. *Mistura Moschi.* L. & U. S. *Tinctura Moschi.* D. & U. S.

No. 390.—Moxa.

Cabinet specimen, Jeff. Coll. No. 468

An actual cautery, used in surgery. Made in China, from plants mentioned in No. 87. The pith of the common large annual sun-flower has been found by Mr. Wallace, of London, to answer the same purpose. I should suppose the Chinese *jaustic*, sold by tobacconists for lighting segars, would answer the end.

No. 391.—Myristica Moschata. The nutmeg tree.

Cabinet specimens, Jeff. Coll. Nos. 469 and 470—figure of the tree, No. 471.

The Nutmeg, and its arillus called Mace, are aromatic spices, recognised by all the Colleges. The tree is a native of the Molucca Islands, from which it has nearly been extirpated by the narrow policy and cupidity of the Dutch. It is now cultivated only at Banda—(the nutmeg islands embraced by this name, are, Neyra, Lenteira, Paulo-Aya) where a sufficiency for supplying the whole of Europe and America with nutmegs and mace, is reared.

Offic. Prep. *Spiritus Myristicæ*. L. E. D.

No. 392.—Myroxylon Peruiferum. Sweet-smelling Balsam tree.

Cabinet specimen, Jeff. Coll. No. 472—figure of the tree, No. 473.

Officinal. *Myroxyli Peruiferi Balsamum*. Edin. Peruvian Balsam; commonly, Balsam of Peru.

This tree is a native of Peru, where it is called *Quinquino*, and the bark is used by the natives as a perfume.

Possesses the properties of all balsams. Dose, f℥j. Is used externally, to stimulate indolent ulcers. Mr. A. T Thompson speaks of the beneficial effect of a mixture of ℥j of the balsam, and ℥iij of ox-gall, dropped every day into the ear, after syringing with a solution of soap, to correct fetid discharges from that organ.

No. 393.—Myrrha. Myrrh. The gum-resin, so called.

The vegetable secretion of some unknown plant, native of the eastern coast of Arabia Felix, and of Abyssinia: growing, according to Bruce, behind Azab, along the coast, towards the Straits of Babelmandel.

Qualities well known; and its peculiar fragrant odour, and bitter aromatic taste, are agreeable to most persons; contains resin, gum, extractive, and essential oil: is tonic, and reputed expectorant. Best given in substance—dose.

grs. x to ʒj. The alkalies, in their crystalline state, triturated with it, reduce it to a tenacious mass. Myrrh is often fraudulently adulterated with other gums.

Offic. Prep. *Tinct. Myrrhæ.* L. E. D. & U. S. *Tinct. Aloes et Myrrhæ.* E. *Tinct. Aloes Ætherea.* E. *Mistura Ferri comp.* L. *Pil. Aloes cum Myrrha.* L. E. D. *Pil. Ferri cum Myrrha.* L. *Pil. Galbani comp.* L. D. *Pil. Assafœtid. comp.* E. *Pil. Rhei comp.*

Formulæ—

No. 1. ℞ Myrrhæ, ʒss
Sacchari purificati, ʒss

Triturate well together into a powder, and divide into two parts, one to be taken at a dose, in any convenient vehicle.

No. 2. ℞ Myrrhæ, ʒiss
Scillæ exsiccat. ʒss
Extract. Hyoscyami, ʒij
Aquæ, q. s.

Make 30 pills—2 the dose, at bed-time, said to act in promoting expectoration.

No. 3. ℞ Pulveris Myrrhæ, grs. xij
——— Ipecacuan. grs. vj
——— Potassæ Nitrat. ʒss

Mix, and divide into 4 equal doses, of which one may be taken every fourth hour, to act as an expectorant.

No. 394.—Myrica cerifera, Wax Myrtle.
——— Pennsylvanica,
——— Caroliniana,
——— gale,

Are all indigenous aromatic astringents and tonics, well worthy of an experimental inaugural essay. (See Barton's Collections, &c.)

No. 395.—Myrtus Pimenta.

Officinal. *Baccæ.* The berries. Pimento, of the Colleges.

Cabinet specimens, Jeff. Coll. Nos. 474 and 475—figure of the tree, No. 476.

The well-known alspice of commerce. The Colleges admit these berries, and direct an essential oil from them, *Oleum Pimenta*, which however is not much used in medicine, in the United States.

N.

No. 396.—Narcotina. Narcotine—(called also Opiane; and Matter, or salt of Derosnes) the narcotic principle of opium, and other narcotic plants. See *Papaver*.

No. 397.—Nicotiana Tabacum. Tobacco.

Cl. 5. Ord. 1. *Pentandria Monogynia*. Nat. ord. *Luridæ*, Linn. ***Solaneæ*, Juss.**

Officinal. *Tabaci folia*. Lond. *Nicotianæ Tabaci folia*. Edin. *Nicotianæ folia*. Dub. *Nicotiana Tabacum, folia; Tabacum*. **U. S.** Tobacco—the leaves.

Cabinet specimen, Jeff. Coll. figure of plant, No. 477.

A well known annual plant, first discovered by the Spaniards, in Yucatan, in 1520. Yields a green essential oil, when distilled, on which the medicinal properties have been supposed to depend. Its poisonous effects are very powerful; according to Mr. Barrow, the Hottentots use it to destroy snakes. He says, "a Hottentot applied some of it, from the short end of his wooden tobacco-pipe, to the mouth of a snake, while darting out its tongue. The effect was instantaneous as an electric shock; with a convulsive motion that was momentary, the snake half untwisted itself, and never stirred more; and the muscles were so contracted, that the whole animal felt hard, and rigid, as if dried in the sun." (Travels in Africa.) It is supposed to be the "*juice of Cursed Hebenon*," by which, according to Shakspeare, the King of Denmark was poisoned. The oil is dissipated by long coction of tobacco, in water; in distillation with ether, water, or alcohol, no oil comes over. Infusion by either of these fluids, takes up the active principles: contains nitre, which causes the deflagration in fanning. Bouillon la Grange discovered muriate of potash, in its inspissated juice; Orfila concludes from experiments, that the active property of tobacco, exists in that portion soluble in water, and that it is absorbed and carried into the circulation. He believes the deleterious effects depend on a specific action on the nervous system and remarks, that they produce a general trembling, not induced, or but rarely, by other poisons; that tobacco is still more virulent, introduced in solution, by the anus, than when applied to the cellular texture, and "for a still stronger reason, than when introduced into the stomach." That the empyreumatic oil, *does not* act directly on the brain, nor on the body of the nerves, but that it directs its action to the nervous system, in an inscrutable inexplicable manner.

Medical Properties and Uses. *Errhine*, Narcotic, sedative, emetic, diuretic, cathartic, either when externally applied or internally taken—used in enemata, for purposes mentioned in the therapeutic outlines. The native doctors of India, according to Ainslie, apply the leaves to the orifice of the anus, for the purpose which the enema is intended to answer. The suppository proposed, by Mr. Earle, is an imitation of this practice. A cataplasm of the leaves on the stomach produces puking; clysters of the infusion have been used in ileus and strangulated hernia. Cataplasms are used in obstinate herpetic, and other cutaneous diseases. The juice of the green leaves, instantly cures the stinging of nettles—I have found it to do the same in the bites of mosquitoes and gallinippers. The pernicious effects of tobacco, as a luxury, will be discussed in the lectures. Fowler employed an infusion made with ℥j dried leaves, and Oj boiling water, in the dose of ♏lx to ♏lxxx, twice a day, as a diuretic; similar to digitalis, but a more dangerous medicine.

Tobacco is adulterated with the leaves of cynoglossum, or hounds-tongue—and those of dock.

Offic. Prep. *Infusum Tabaci.* L. & U. S. *Vinum Nicotianæ Tabaci.* Edin. & U. S.

Formulæ—

No. 1. ℞ Tabaci foliorum, ℥j }
Aquæ fontis, q. s. }

For external application to the epigastrium.

No. 2. ℞ Tabaci foliorum, ℈j }
Aquæ ferventis, f℥viij }

Macerate for an hour, in a vessel lightly covered, for an enema.

No. 3. ℞ Olei Tabaci, ♏xx } Mix.
Adep. Suillæ, ℥j }

An ointment, used with advantage in removing indolent swellings of the lymphatic glands.

Thomas T. Hewson.

No. 398.—Nicotina. Nicotine.

Cabinet specimen, Jeff. Coll. No. 478.

There are two active and deleterious principles in tobacco, the essential oil, and nicotina, either of which is capable of inducing death: the first by its effects on the brain, and the latter, according to the experiments of Brodie, by its action on the heart, occasioning first syncope, through the medium of the nervous influence, and consecutive effects, more or less disastrous, even to death, in proportion to the quantity of the drug introduced into the

system. Tobacco contains, albumen, mucilage, gluten, extractive, a bitter principle, an essential oil, (already noticed,) nitrate of potass, muriate of potass, and a peculiar proximate principle, on which the properties of the plant are supposed chiefly to depend, viz. the subject of this number. Vauquelin considers nicotina, as approaching the volatile oils in its properties. It is volatile, poisonous, colourless, taste acrid, smell that of tobacco, sternutatory, soluble in alcohol and water, producing colourless solutions, from which it is precipitated by infusion of galls. Has not been applied to medical purposes, though it might, if its dose and peculiar effects were ascertained, be found a useful medicine. Is therefore a subject for an experimental inaugural essay. Nicotina will certainly be obtained from nicotiana rustica—(See W. P. C. Barton's Fl. N. Am. Vol. I. plate 25)—for Orfila has found that its extract acts like tobacco, but with less intensity.

No. 399.—Nux vomica. The vomic nut—the deadly poisonous fruit of *Strychnos nux vomica.* which see.

O.

No. 400.—Olea Europæa. The Olive tree.

Officinal. *Olivæ oleum*, of the Colleges—Olive-oil.

Cabinet specimen, Jeff. Coll. figure of the tree, No. 479.

A small tree, from 10 to 20 feet high, native of the South of Europe, and North of Africa, where it is named Zituna—it is cultivated in France, Spain, and Italy.

Qualities of the oil well known—it purges in dose of f℥j.

No. 401.—Olea Distillata. L. & U. S. *Olea Volatilia.* E. *Olea Essentialia.* D. Distilled Volatile or Essential oils.

The British and U. S. Pharm. direct them to be obtained by distillation only. The French Codex orders several of them to be prepared by expression.

Qualities. Liquid, sometimes viscid; of various sp. gr. the oil of turpentine, which is the lightest, being 0.792, while that of cloves, cinnamon, allspice, exceed 1.050 that of sassafras, which is the heaviest, is 1.094—these latter, hold resin in solution, and sink in water. They are all penetrating and fragrant, of an acrid taste, volatilizable at a temperature a little below 212° F. inflammable; soluble in alcohol, thus forming essences; somewhat soluble in water; these solutions are called, in Pharmacy, distilled

waters—soluble in ether and the fixed oils—alkalies impair the odour of some, and enhance it in others. Rapidly decomposed by nitric and sulphuric acids, sometimes with instantaneous inflammation. The chief are, *Olea Anisi, Anthemidis, Carui, Chenopodii, Cumilæ, Fœniculi, Gaultheriæ Juniperi, Lavendulæ, Menthæ pip. and Menthæ virid. Monardæ, Origani, Pimentæ, Pulegii, Hedeomæ, Rosmarinæ, Rutæ, Sassafras.*

Cabinet specimens, Jeff. Coll. Nos. 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499.

(The *Huiles Antiques*——used for anointing the hair, are made of different oils. The base of these, when good, is the oil from the nuts of the *Guilangia Moringa*, called Oil of Ben, or Benne Oil. The oil of hazel, is a good substitute, being inodorous, and without colour, and not liable to rancidity. It can be made to receive the odorous essences with which these oils are charged.)

No. 402.—Olea Expressa. L. D. *Olea fixa, sive expressa.* E.

Expressed or fixed oils, obtained from animal matter, by fusion, and from vegetable, by expression. They are insoluble in water, and, except castor oil, nearly so in alcohol and ether; form soaps, with caustic alkalies—aided by heat, readily unite with oxide of lead, forming a mass of a solid and peculiar consistence, well known by the term *plaster*; unite with each other and with volatile oils; dissolve sulphur, forming a kind of balsamic compound. Extract and dissolve the narcotic and acrid principles of many vegetable and animal products. The French Codex recognises solutions of this kind, unknown in our Pharmacopeias, under the name *Olea Medicata*, such as *Olea Cicutæ, Hyoscyami, Solani, Stramonii, Nicotianæ*—these are made by digesting, by gentle heat, one part of the narcotic, with two parts olive oil.

Examples of expressed vegetable oils, are Oil of Benne, or Gingilly oil, from the seeds of an African plant, the *Sesamum orientale*. *Ol. lini*, from flaxseed, called linseed oil. *Ol. ricini*, from the beans of *Ricinus communis*. *Ol. Tiglii*, from beans of *Croton tiglium*. *Ol. palmæ*, palm oil or Mackaw fat, from No. 177. *Ol. Amygdalæ*, Oil of Almonds, (of the same properties, whether from sweet or bitter almonds.) *Ol. Oliva*, Oil of olives, &c. &c. Of the animal expressed oils, are neatsfoot oil, train oil, and many more course and well known oils, some of which are refined and purified, for medical purposes, as for embrocations, &c.

No. 403.—Oniscus ascellus. Slaters. The Off. *Millepedæ*, of the Dublin College.

Place them with soot, ashes, cobwebs, and the like—equally disgusting with the powder of the human cranium, particularly of its *os triquetrum*, which was used in doses, of ℥j, in epilepsy!!!—with the *vomit*, (I think so indeed) of *rasura unguis*, nail pairings; powder of Egyptian mummy, used in epilepsy; live puppies, split open, as a poultice, (this I have seen done myself, in Lancaster, for white swelling.) Wolf's liver, for *liver* diseases! Fox's lungs, dried and powdered as a *pectoral!* &c. &c.—Let all these remain together, the evidence of credulity, weakness, and vulgarity.

No. 404.—Opium. See *Papaver*.

OPIANA one of its active principles. See the same.

No. 405.—Opoponax. A gum-resin, the product of *Pastinaca opoponax*—or rough Parsnip, which see.

No. 406.—Origanum vulgare. Common or wild Marjoram.

Officinal. *Origanum*. Lond. Common marjoram leaves.

Cabinet specimens, Jeff. Coll. No. 500—figure of the plant, No. 501.

A didynamous verticillate indigenous plant, yielding the officinal preparation, *Oleum Origani*. L. & U. S.

The medical use of the leaves is obsolete—the oil is applied only externally.

Species 2.—ORIGANUM MARJORANA—called sweet marjoram.

Cabinet specimen, Jeff. Coll. figure of the plant, No. 502.

Is used as a potherb, and renders every thing into which it enters in culinary processes, indigestible and oppressive. It is still recognised by the Edinburgh College, for its tonic and errhine properties—might well be left out. I have seen much mischief, by the exhibition of sweet marjoram tea, and saffron tea, given by nurses, to *bring out* the *measles*.

Species 3.—ORIGANUM DICTAMUS.
Synonym ——————— CRETICUM.

Is the Dittany of Crete.

Cabinet specimen, Jeff. Coll. figure of the plant, No. 503.

No. 407.—Ostrea edulis. Officinal the Testæ, the shells of the common Oyster.

Antacid; less so in their unburned state than chalk; calcined, do not differ from lime, and might be left out of the Materia Medica.

No. 408.—Orchis mascula. Male Orchis.

——— morio. Fools' stones.

Cabinet specimen, Jeff. Coll. No. 504—figure of the plants, Nos. 505 and 506.

Two gynandrous plants, yielding (chiefly the first) the Salep or Salop of the shops; a restorative dietetic; grs. viij render an ounce of water so thick, that it will scarcely pass through a cloth. I have no doubt that other Orchidean plants, of which we have numerous indigenous species, will be found to yield Salep. They are worth investigation, as a subject for a thesis.

No. 409.—Ovis Aries. The Sheep.

Officinal. *Adeps ovillus.* Edin. *Sevum.* Lond. *Sevum ovillum.* Dub. Mutton suet—used in the Offic. Prep. *Sevum præparatum.* L. to give consistence to ointments and plasters.

No. 410.—Ovum Phasianthi Galli. The egg of the common fowl.

Made officinal by the London College; and the *vitellus*, yolk or yelk, is used in extemporaneous pharmacy, as a reconciling ingredient in mixtures containing substances difficult of suspension. It is noticed here, that you may be able to write prescriptions correctly.

No. 411.—Oxalis Acetocella. Wood sorrel.

Cabinet specimen, Jeff. Coll. No. 507—figure of the plant. No. 508.

Officinal. *Acetocella.* Lond. Wood sorrel.

Its active principle is a super-oxalate of potass, which is obtained from the expressed juice, and when crystallized, is sold under the name of *Essential Salt of Lemons*, used to take ink-spots out of linen and other *white* fabrics—diluted, has been medically used as citric acid is. The recent plant is eaten as a salad, and said to be anti-scorbutic, as it doubtless is.

No. 412.—Oxymel simplex. L. D. (*Mel acetatum.* P. L. 1787.) Simple Oxymel.

A composition of honey and acetic acid, much used as the basis of gargles for sore throat. It is common to combine an infusion of sage with it, in domestic practice—this is a pernicious custom, the sage being powerfully astringent; often does harm, where high inflammation exists, as it frequently does, without being known to the patient, who merely complains of a *sore throat*. I have seen great mischief from strong sage-tea and honey, as a gargle: it should always be prescribed by a physician, who can direct the proper strength of the astringency.

P.

No. 413.—Papaver.

Cl. 13. Ord. 1. *Polyandria Monogynia.* Nat. ord. *Rhœadeæ.* Linn. *Papaveraceæ,* Juss.

Two species medicinal—

1. *Papaver Rhœas.* Corn or Red Poppy
2. ——— *Somniferum.* White Poppy—Opium Poppy.

I. PAPAVER RHŒAS.

Cabinet specimen, Jeff. Col. No. 509—figure of the plant, No. 510.

Officinal. *Rhœades petala.* Lond. *Papaver erraticum; petala.* Dub. Petals of Red Poppy.

Grows in corn-fields in Europe, but not in this country to my knowledge: it is often, however, cultivated in gardens. The capsules of every species of this narcotic genus, yield Opium. Bouldue and Alston have obtained it from this, but in small quantities. The petals have a faint narcotic odour, and a slight bitter taste—they are used in the Off. Prep. *Syrupus Rhœades.* L. D.

II. PAPAVER SOMNIFERUM. White or Opium Poppy.

Cabinet specimen, Jeff. Coll. No. 511—figure of the plant, No. 512.

Officinal. *Papaver Somniferum; succus concretus.* U. S. The concrete juice, Opium. *Papaveris Capsulæ.* Opium. Lond. *Papaveris Somniferi Capsulæ.* Opium. Edin. *Papaver album; capsulæ, opium; succus concretus.* Dub. Poppy capsules, or heads; and opium.

An annual glaucous plant, native of Asia, and introduced and naturalized in the southern parts of Europe, and even, according to Mr. A. T. Thompson, in England.

Professor Green, of Jefferson College, states, in his Address on the Botany of the United States, delivered in Albany, 1814, to the Society of Useful Arts, that "in Niskeuna and Lebanon, the Society of Shakers raise the *Papaver Somniferum;* and they have supplied this city [Albany]

for a short time, with opium, some of which was little inferior in quality to that imported from the Levant or the East Indies. Dr. Rickertson, of Dutchess county (N. Y.) also cultivated the poppy to advantage: from one plant he procured 7 grains of opium. As far north as New-Hampshire, Dr. Spalding prepared this gum from the true opium poppy (*Papaver Album*) and also from the common poppy of the garden."

The whole plant contains the *succus proprius*, which most abundantly exudes from the capsules. It is a milky, snow-white, opaque, narcotic juice, differing in no apparent circumstance from the proper juice of numerous less narcotic lactiferous plants.

It is obtained immemorially in the same manner, by making longitudinal scarifications of the cortex of the capsules—the dews favour the exudation, and the concrete is collected in the morning, deposited in earthen vessels, rubbed about with wooden spatulas in the sunshine, until it acquires spissitude; formed into cakes or rolls, covered with poppy or tobacco-leaves, (in India,) and with the leaves and red capsules of a species of Rumex. The Turks call Opium *affiom;* and in the *theriaki kikanu*, or opium-shops of Constantinople, they take it in graduated doses, from 10 to 100 grains, in syrups and inspissate fruits, or in lozenges marked *Mush Allah*—literally, "the work of God." The Tartar couriers, who travel great distances with astonishing rapidity, take nothing else to support them during their journeys. (Dallaway's Constantinople.) There is some reason for supposing that the *Mush Allah*, or *Malash*, of the Turks, contains other narcotics beside opium, as hemp and lolium.

According to Kempfer, the product of the first incisions is of a pale yellow, and called *Gobaar* in Persia, and is esteemed much superior in strength and goodness to any other collection.

In England, a Mr. Ball, in 1796, received a premium from the Society for the Encouragement of Arts, for a specimen of British opium, little inferior to the oriental. *Mr. Young.* (Edin. Med. & Phys. Journ. No. 11. p. 262.)

Qualities. Dried capsules* slightly bitter by chewing, without odour; infused in water, the mild anodyne quality is imparted, and when the fluid is evaporated, a mild opium is obtained, in form of extract. There are two kinds of opium—Turkey and East India. Turkey opium has a heavy narcotic odour, taste bitter, warm, sub-acrid: kept

* The London market is supplied with three annual collections of poppy capsules, from Mitcham, in Surrey. The bags contain 3000 capsules, each bag sells, according to Stevenson, at 4*l.* 10*s.*

long in the mouth, by those unaccustomed to it, blisters When compact, and of a reddish-brown hue, is good Specific gravity, 1.336; is inflammable; partially soluble in water, acetic, acetous and citric acids, alcoholic liquors, and ether; is changed by long keeping and gradual exsiccation, so as to break with a shining fracture, and easily pulverizable, the powder being yellow-brown. One of the cabinet specimens, presented by Thomas Astley, Esq. is 25 years old, perhaps more, having been that length of time in his keeping and mine.*

East India Opium has a strong empyreumatic smell, and is destitute of the strong narcotic odour of the Turkey—it is as nauseous, more bitter, but less acrid; is blacker, equally tenacious, but less plastic; more friable; more completely soluble in water, 8 parts in 12 being dissolved, the residual 4 parts being suspended. The sensible properties of both, with the exceptions mentioned, are similar. The aqueous infusions of both are transparent by filtration; both rubify litmus paper; neither is decomposed by alcohol; both are precipitated by carbonates of potass and of soda, and by pure ammonia. For all the incompatible substances, see Tables at end of Vol. I.

Opium is one of the royal family of the therapeutic empire: and all its offspring, now so various, are ennobled by the prerogative of power and influence over the human constitution, so conspicuous in the original stock. The lucid investigations of chemistry have found fruitful subjects for their keen-eyed penetration; and the proximate principles which they have brought to light, are not less interesting than useful. We are indebted for these results, which will directly be stated, to the successive labours of Derosnes, Seguin, Sertuerner, Robiquet, and Magendie—enlightened, persevering chemists. It has been ascertained, that Opium consists of resin, gum, bitter extractive, sulphate of lime, gluten *narcotina*, and a peculiar alkaline body, containing the soporific virtues of the drug—this is called *Morphia*; it exists in natural combination with a peculiar, and, till these investigations, unknown acid, now called *meconic acid*. This alkaline principle of opium is a meconiate or super-meconate of morphia. Derosnes first obtained a crystalline substance from opium, in 1803: he found it soluble in acids, but no further ascertained its properties. Seguin, in 1804, discovered another crystalline substance

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* *Philada. Friday, Oct'r. 26, 1827.*

Dear Sir—

The specimen of Opium, which I gave to you a year or two ago, came into my possession in the winter of 1802–3. I have no knowledge of the age it had at that time. Yours, very truly,

F. ASTLEY.

W. P. C. Barton, M. D.

in the drug, without knowing its alkaline nature, though he described many of its properties. Simultaneously with these discoveries, Sertuerner, at Embeck, in Hanover, obtained both these crystalline bodies. In 1817, he first announced unequivocally the existence of a vegetable alkali in opium, attributing to it the narcotic powers of the drug—naming it *Morphia*. This is identical with the proximate essential salt obtained by Seguin. That of Derosnes is now called *Narcotina*—the difference between which and the salts of Morphia, one of which it was supposed to be, was first noticed by Robiquet. He identified its discrepant and distinguishing properties.*

MORPHIA. Morphine.

Cabinet specimen, Jeff. Coll. No. 513.

When pure, is in fine, transparent, truncated, pyramidal crystals, with square or rectangular bases, at which they are occasionally united, forming octohedral crystals; very soluble in hot alcohol, the solution being very bitter—sparingly in boiling water; much less soluble in ether than alcohol. Changes turmeric, and violet stained paper, as alkalies do; forms neutral salts with acids, and decomposes the compounds of acids with metallic oxides; its combination with sulphur, by assistance of heat, is nearly simultaneously decomposed; does not form soap with an oxidized oil; fuses at a moderate temperature, in a mass resembling melted sulphur, and like it, crystallizes on cooling. It is decomposed by distillation, the products being oil, carb. ammonia, and a black residual resin of peculiar odour; heated in contact with air, inflames quickly; appears to commingle with mercury, and change its consistence; is unaffected by the Voltaic pile. Its ultimate component principles, like those of many other proximate vegetable products, are (analyzed by the deutoxide of copper,) carbon, hydrogen, and oxygene—and nitrogen, if ammonia have been employed as a precipitant in preparing it, as is the case with nearly all the modes but that of Robiquet. Paris states the crystalline formation of the salts of Morphia; for which, Mr. G. W. Carpenter has erroneously given credit to Dr. Coxe, by remarking, in his paper on the constituent principles of opium, in the

* For a detail of the processes, used by these chemists, to obtain these principles, I refer you to the Annales de Chimie, vols. 45, 92, and to Annales de Chimie et Phys. tom. 5; to Thompson's paper on *Morphia* in the annals of Philosophy, for June 1820—to Magendie's Formulary, translated by Dr. Hoagland, Professor, &c. in the University of Virginia; to the New Parisian "Codex," and generally to the periodical publications, of the last few years, on materia medica and chemistry; to the researches of our eminent countryman, Professor Hare, in the Phil. Journ. Med. and Phy. Sc; and to the personal information of my colleague, Professor Green, whose intimate knowledge of the subject of his chair, will enable him to afford you any information on this subject you may desire.

Phil. Jour. of the Med. and Phys. Sciences, for August, 1827. "I am indebted to Dr. Coxe, for the following interesting history of the crystalline forms of its (Morphia) saline compounds"—then quoting, as from Dr. Coxe, *verbatim*, what is from Paris, the following :—

Carbonas Morphiæ crystallizes in short prisms.

Acetas Morphiæ, in soft prisms, very soluble, and extremely active.

Sulphas Morphiæ, in arborescent crystals, very soluble.

Murias Morphiæ, in plumose crystals, much less soluble: when evaporated, it concretes into a shining white plumous mass on cooling.

Nitrates Morphiæ, in prisms grouped together.

Meconias Morphiæ, in oblique prisms, sparingly soluble.

Tartras Morphiæ, in prisms.

I have only changed Paris's statement, by Latinizing the salts, for officinal uniformity.

Magendie says, the oleaginous compound of olive oil and morphia, acts with great intensity.

The *Acetas Morphiæ*, is the most active salt, and is officinal in the Paris Pharmacopeia, with directions for its preparation. May be given in pills, electuary, draughts, or mixtures. Dose, $\frac{1}{4}$ of a grain to gr. i, in 24 hours.

Cabinet specimens, Jeff. Coll. Nos. 513* and 513**.

Formulæ—

Liquor Morphiæ acetatis—solution of acetate of Morphine

No. 1. ℞

Acetas Morphiæ,	grs. xvi
Aquæ Distillatæ,	℥vj
Acid. Acetici dilut. (P. L.)	℥ij

Syrupus Morphiæ acetatis—syrup of acetate of Morphine

No. 2. ℞

Syrupi Purificati,	1 ℔
Morphiæ Acetatis,	grs. iv.

Dose, one or two tea-spoonfuls, in a little water. every 3 hours.

Guttæ Anodynæ—Anodyne Drops.

No. 3. ℞

Morphiæ Acetatis,	grs. xvi
Aquæ Distillatæ,	f ℥j
Acidi Acetici,	♏ iij
Alcoholis,	q. s.

To keep the salt in solution—said to be a good substitute for laudanum. Dose, gtts. vi to xxiv.

No. 4. ℞

Morphiæ Sub-acetatis,	grs. xii
Alcoholis cum acid. acetic. fort.	℈j
Gutt. xii,	
Aquæ Distillatæ,	℥j

This formula makes a preparation, which Mr. Carpenter, who has furnished it to me, informs me, will keep well. The morphia is to be dissolved, in the acidulated alcohol, the water gradually added, and the solution filtered. Dose, xv to xx drops.

The sulphate of Morphia is less active.

Syrupus Morphiæ sulphatis—syrup of sulphate of Morphine.

Formula— ℞ Syrupi Purificati, 1℔ }
Morphiæ Sulphatis, grs. iv }

Dose, same as the syrup of the acetate.

Robiquet had observed, that the process for obtaining morphia, did not entirely deprive the opium of the alkaline salt. The residuum, still containing some, exerted a narcotic property, on animals, subjected to its exhibition, by Magendie, as well as on man; he observed that this was less energetic than the effect of common aqueous extracts, but sufficiently decided to lead him to the opinion that it ought to be kept by apothecaries, who prepare their own morphine. Dose, may be regulated by his statement, that 4 grains are scarcely equivalent to one grain of the ordinary watery extract, or to ¼ of a grain of morphine.

NARCOTINA. Narcotine, (called also Opiane—Matter, or salt of Derosnes.)

Cabinet specimen, Jeff. Coll. No. 514. Duplicate 514, by Staples's process.

Obtained by Sertuerner, by a detailed process thus generalized: repeatedly exhausting opium in two parts of boiling ether, mixing the solutions, filtration, evaporization of the ether; this yields a twofold product, viz.; 1. a saline crust, being a union of narcotine, with an acid; 2. a brown bitter acid liquor, containing resin, narcotine, and an acid, from which narcotine may be obtained by evaporization, and treating the residuum with water, which, not dissolving the resin, allows the narcotine to be precipitated from the filtered liquor, by ammonia. Narcotina is obtained afterwards from the saline crust, by depriving it of the resin and caoutchouc, by means of rectified oil of turpentine, washing the residuum in cold alcohol, then dissolving it in hot, and precipitating the narcotine, by ammonia, as before. The two precipitates are again dissolved in a minute portion of hydrochloric acid, and re-precipitated by the same agent as before. Mr. Carpenter has obtained narcotine, in this city, by a similar process; and he informs me, in a late letter, that he has "discovered that the feculencies of opium, from which laudanum had been made, contain a considerable portion of narcotine, resin, caoutchouc, &c. which proves that laudanum is far from containing the whole

amount of narcotine, which is in the opium." One of my assiduous Botanical pupils, Mr. Edward Staples, of this city, has made beautiful morphia, by a process of his own, which I trust he will publish—(See last page of this work.) Cabinet specimen, Jeff. Coll. No. 515, is a sample.

QUALITIES. Crystallizes from its alcoholic ethereal solution, in fine needles, or in rhomboidal prisms; has no action on vegetable colours, no smell, no taste. Cold alcohol dissolves one-hundredth part; boiling, one-twenty-fourth part of its weight. Hot ether dissolves a considerable quantity, from which, on cooling, it is deposited in a crystalline form. An oleaginous solution of one grain, *Magendie* found to kill dogs, in 24 hours after precurse narcotic symptoms; with acetic acid, animals supported a dose of 24 grains without perishing, though convulsed as by camphor. He found, by giving Morphine and Narcotine together, the peculiar effects of each were developed simultaneously. He observes, a person who takes morphine only, does not experience that excitement which follows the use of the aqueous extract of the shops, in which that salt is combined with narcotine. This latter salt, is contained in other narcotic plants, besides opium.

EXTRACTUM OPII NARCOTINA PRIVATUM. Extract of Opium deprived of Narcotine.

This, and its tincture, which has now become so *fashionable* in Philadelphia, under the name of denarcotized laudanum, were first prepared by Robiquet, by macerating coarsely divided opium in cold water, filtrating and evaporating to the consistence of a thick syrup, digesting in rectified ether, and after frequent agitation, decanting the ethereal tincture, and evaporating the ether. He repeated this process as long as crystals of narcotine were residual to distillation. When ether produced no further effect, he evaporated the solution of opium, to a pilular consistence, and thus obtained an extract, wholly destitute of narcotine. From this, a tincture, if required, would have to be made, thus protracting the already complex process. For a simpler and equally effectual mode of obtaining denarcotized laudanum, the profession is indebted to Professor Hare, which I here quote in his own words, (from the Phil. Jour. &c. No. IX. new series.)

"Some opium, shaved by rubbing it on the face of a jack-plane, was subjected four times successively to as much ether of the specific gravity of .735 as would cover it, allowing each portion to act upon it for about twenty-four hours. The opium was afterwards subjected to as much duly diluted alcohol as would have been adequate to convert it into laudanum, of the common kind, had it not been

subjected to the ether. In the ether which had been digested on the opium, a deposition of crystalline matter soon commenced. The stopple being removed, and the mouth of the containing vessel, (in this case, a common French tincture bottle,) being covered with blotting paper, in a few days nearly the whole of the liquid evaporated spontaneously, leaving much crystalline matter mixed with colouring matter. The former is, no doubt, the principle distinguished by Robiquet, since called narcotine. The digestion of the opium with the ether, is conveniently performed in the papins digesters, which are sold at some of the hardware stores in this city. The ether should be kept near the temperature of ebullition."

Mr. Carpenter has handed me the following account of his experiments with opium, and their products :—

"*Denarcotized acidulous extract of Opium.*—The extract of opium, as it is generally made, is very objectionable, not being more active than crude opium, and consequently is seldom or never employed by our physicians. From various modes and different menstrua, which I have tried, I find the following to possess most advantages, both in the activity and persistency of the extract, as well as having the decided superiority over crude opium, by affording in an undiminished degree all its desirable effects, without any of its inconveniences.

Digest ℥j of coarsely powdered opium, in 1lb of sulphuric ether, of the specific gravity .735 for ten days, occasionally submitting to a moderate heat, in a water bath; distil off the ether, and add fresh portions until it ceases to take up narcotine, or act at all upon the opium, which may be readily known, by dropping a little on a clean pane of glass, which will leave no trace when the opium is completely exhausted; the second or third distillation will prove sufficient. Most of the ether may be saved, if prepared with care, and in proper apparatus. Submit the opium thus treated, to the action of Spt. Vin. Rect. ℥viij; acid acetic fort. ℥j, aquæ ℥vij, and digest for seven days; filter and evaporate in a water bath, to the consistence of an extract. This, in fact, will be an impure acetate of morphia, possessing most of the advantages of that valuable medicine. One ounce of the best Turkey Opium, yielded, by this process, six drachms of extract. Laudanum, and other preparations, may be made of the usual standard, calculating six drachms of the extract equivalent to ℥j of opium.

Denarcotized acidulous tincture of Opium.—Digest ℥j of coarsely powdered opium, in one pint of sulph. ether, s. g. 735 for ten days, occasionally submitting it to a moderate heat, until it ceases to act upon the opium; separate the

opium and dry it, then digest in Spt. Vin. Rect. ℥viij, acid acetic fort. ℥j, aqua, ℥vij, for seven days, and filter. This preparation will be found to possess great advantages over laudanum, and the black drop of the shops, to which it will be much preferable, inasmuch as it will be destitute of the stimulating principle, (narcotine,) which exists in the black drop, and to which is attributed the distressing effect which frequently forbids the use of opium, where it otherwise might be extremely useful. The addition of acetic acid, contributes much to increase the calming or sedative principle. By its union with morphia, it forms in solution the active sedative salt of opium, (acetate of morphia,) and differs only from the solution of the acetate of morphia of the shops, in its state of purity; and as the extraneous matter, with which it is associated, has no effect on the animal system, it may be considered as good an article, and should be preferred for general use, in consequence of being much less expensive."

Professor Hare has contrived a method, by which he informs us, "a quantity of opium, not exceeding that contained in 10 drops of laudanum, may be detected in half a gallon of water;" this is a discovery which may be applied to useful purposes. I subjoin his own account of it, from the Journal already quoted :—

"My process is founded on the property which meconic acid has of precipitating with lead. Hence, by adding a few drops of acetate of lead to any infusion, containing any quantity of the drug in question, not more minute than the proportion above mentioned, an observable quantity of the meconate of lead falls down. The precipitation, where the quantity is small, may require from six to twelve hours, and may be facilitated by a very gentle stirring with a glass rod to detach the flocks from the sides of the recipient, which should be conical, so as to concentrate them during their descent. The meconate being thus collected at the bottom of the vessel, let about thirty drops of sulphuric acid be poured down on it by means of a glass tube. Let this be followed by as much of the red sulphate of iron. The sulphuric acid liberates the meconic acid, and thus, enables it to produce, with the iron, the appropriate colour which demonstrates the presence of that acid, and consequently of opium."

The medical uses of Opium, and its preparations, are well known.

The testimony of Dr. Dewees, in favour of the use of denarcotized laudanum, is published in the Journal, quoted above; the medicine is now manufactured in this city, by several druggists and chemists, and is much used by physicians. Among others, I have prescribed it sufficiently to

know its effects—I confess myself to have been disappointed somewhat in these, but as I do not wish to retard, by a discouraging word, the laudable advances we are making, in the United States, to imitate the zeal of European chemists, which has so much improved and enriched our code of medicines, I forbear to do more than express an earnest desire that no carelessness in its preparation may lead physicians to discard it.

No. 414.—Pastinaca Opoponax. Opoponax, or Rough Parsnip.

Officinal. *Opoponacis gummi resina.* Lond. Opoponax.

Cabinet specimen, Jeff. Coll. No. 516—figure of the plant, No. 517.

A pentandrous, umbelliferous, perennial plant, native of the Levant and south of Europe, with a yellow root as thick as a man's arm, invested with a corky bark. In the Levant, incisions are made in them, the lactiferous juice exudes, and, dried in the sun, is Opoponax. It comes from Turkey, in tears or drops, or in irregular lumps.

Qualities. Strong disagreeable smell, bitter acrid taste—according to Pelletier, is a compound of gum, resin, starch, extractive, wax, malic acid, a trace of caoutchouc, and essential oil.

Medical Properties and Uses. Antispasmodic, and used as an emmenagogue—given in chlorosis and hysteria, like other fetid gums—dose, grs. x to ʒss.

No. 415.—Petroleum. Barbadoes Tar. Naphtha.

See No. 114.

No. 416.—Phosphorus. Phosphorus.

Officinal. As above. U. S.

A substance sui generis, obtained from bones and urine, and existing also in the *Antirrhinum Linaria*, or toad-flax—the *Œnothera Biennis*, or evening primrose, and other plants. It is an energetic universal stimulant, of treacherous character, and often developing dangerous effects, even when narrowly watched and cautiously prescribed with knowledge of its capricious tricks on the system. It is consequently a dangerous remedy, and should never be prescribed by a young practitioner. It rouses the circulation; raises the temperature of the body: augments the secretions, particularly of the kidneys; invigorates the muscular, nervous, and intellectual energies. It is said to incite desires to Venus—and hence has been used to rouse the torpid, to renovate the faded, or restore the lost, procre-

ative function!—all which must be preposterous. The stomach has been found inflamed to a great degree, when death has ensued from its effects. It produces gastritis, excessive diuresis, and much intensity of the general physiological functions. Has been used in low typhus, gangrene, the neuroses, dropsy, gout, rheumatism, suppressed menses, and other uterine affections. May be used in emulsion or solution, so prepared that ¼ gr. may be given at a dose, and not more than 1 or 2 grains in 24 hours.

Dr. Lobstein, of this city, has written a small ingenious work on Phosphorus, to which I refer you for further information. It has been in fashion of old—was revived—slumbered—revived again, and was in fashion but a short time since—is used again, in this city, *at this day*. In the words of the song, we may say, when next we meet it in fashion again, "this day may be an auld lang syne."

Formula— ℞ Phosphorus, grs. iv }
Ætheris Sulphuricis, f℥j }
Dose, 5 or 6 drops, in a table-spoonful of water—in cases of great debility. *Conradi.*

No. 417.—Phyllanthus Rhamnoides. (Retz.) called, in India, *Pavala Poola.*

The Tamool doctors use the leaves, by moistening them with a little Castor oil, and frequently in conjunction with the tender shoots of the *Nux Vomica*, and leaves of the *Ricinus communis*—applying the whole, warm, as a poultice, in Anthrax, a disease common among the wealthy Hindoos, who eat much *ghee*, (clarified butter,) and get fat.

No. 418.—Phytolacca Decandra.* Poke.

Officinal. *Radix.* The root.

Cabinet specimen, Jeff. Coll. No. 518—figure of the plant, No. 519.

For a detailed account, see W. P. C. Barton's Veg. Mat. Med. U. S. Bigelow's Med. Bot. and Ives' ed. Paris's Ph.

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* I wonder where Mr. Gray (Supplement, &c.) got the name *Jugato Callelve* for this plant, and discovered that it is "a very common dessert fruit in America!"—and I still more wonder, that the "American physician," who has so freely used Mr. A. T. Thompson's London Dispensatory, by reprinting not less than 500 pages of it, besides copying *out* his poor execution plates, with all the accuracy of the engraver, without, I think, sufficient acknowledgment, should have copied Gray's incorrect statement of an American plant, when the American writers could have furnished him with better information, if he had been at the trouble, as was a duty pledged to the public on the title-page, to consult them works. Already a few words had found their way between Thompson's text, on the Poke—why then this aftercrop in the Appendix, No. II. Much of this Appendix, by the way, is taken, verbatim, from Gray's Supplement, and the *Thesaurus Medicaminum*—from Gray so injudiciously, by shreds, as to make some of his remarks ridiculously unmeaning, or, worse, exceedingly erroneous. When

No. 419.—Physeter Macrocephalus. The Spermaceti Whale, yielding the officinal concrete No. 161.

No. 420.—Picrotoxa. Picrotoxine. The proximate bitter poisonous principle of No. 381, which see.

No. 421.—Pilulæ. Pills.

The chief officinal will be found noticed in Nos. 39. 121. 217, 218. 261. 266. 300; and under the numbers embracing Tar, Gamboge, Myrrh, Opium, Rhubarb, Soap, Squill, as well as some peculiar to different Colleges, under the officinal preparations, at the end of numbers throughout these Outlines. The Pharm. U. S. directs, in addition to these—*Pilulæ Jalapæ compositæ; Pilulæ Myrrhæ et Ferri; Pilulæ Hydrargyri oxy-muriatis; Pilulæ Arsenici; Pilulæ Antimoniales compositæ; Pilulæ auri muriatis; Pilulæ Assafœtidæ compositæ; Pilulæ Aloes cum Myrrhæ et Guaiaco.*

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shall we cease to render ourselves obnoxious to the just censure of foreign writers—who may say, we use their labours, by scores of hundred pages at a sweep, without their authors' names appearing, as they ought, in the titles of such works. Nearly all of the one alluded to, amounting to upwards of 600 pages, besides the plates, is a reprint of Thomson's book, some few sheets excepted, to make way for a few leaves from Paris's Pharm., a little from Dyer-son's Edin. Dispensatory, and about 10 pages of Appendix No. 11. from sources not acknowledged. This is the true amount of the "collation from the best authorities," as is pretended, and I think very probable, that the editor has not been acquainted of the circumstance which the medical public may put on the withdrawing of Mr. Thompson's name—that the cause of my disapprobation, and it was made by necessity, the cause of complaint by Mr. Thompson, has arisen from an oversight in employing such, as it renders American editorship liable to foreign censure, as above mentioned. It is not unlikely, too, that the "American physician," alluded to in the passage cited in Preface, sufficient acknowledgment to Mr. Thompson," "as the work does from foreign sources, which could add to its usefulness, have been freely used in compiling the work." But, were this cited the author of a work of so much labour, merit, and original matter, as the London Dispensatory. I do not believe he would see it so reprinted, and about the amount of such acknowledgment. I can not find Thompson's name in the title. Perhaps he does not put that part of his title-page which says, "comprehending the Practice of the London, Dublin, and Edinburgh Pharmacopœias," enough to Mr. Thompson, if so, surely no one else could think so—since, besides these *first-named*, Thompson's Dispensatory consists of 556 pages of Materia Medica, 32 pages of Tables, Appendix, Index, &c. besides seven copperplates—the great object of which, including the plates, is reprinted. In a word—I object not to the extracts, it contains an infinite deal of excellent matter—and the publishers deserve to be rewarded for their enterprise. But the editor print a new title-page, designating it "*in part a reprint of the London Dispensatory by Anthony Todd Thompson, L. L. S. Surgeon &c. &c. with extensive additions from the Pharmacopœias of Paris's Pharm. and other standard works.*" and none would complain, but of what might be deemed injurious accusations—and such, in my judgment, are to be found in it. A suit at law was instituted against an editor of a Dispensatory in this city, for taking *a few pages* from a New-England Dispensatory into his own—this is well known to the profession.

I write severely on this point—I always write for I think severely on it, having much at heart that we should earn the character abroad, of being fair writers, and just—American literature will be despised else, and our medical authorship undervalued, unesteemed, disregarded. I am willing to be canvassed and adjudged by the same rule—reprobated, if any one can detect my desert of it, as a writer by the same kind of animadversion.

No. 422.—Pimpinella Anisum. Anise.

Officinal. *Anisi semina.* Lond. *Pimpinellæ Anisi semina* Edin. *Anisum; semina.* Dub. Anise-seeds. *Pimpinella Anisum semina.* U. S. Anisum—Anise.

Cabinet specimen, Jeff. Coll. No. 520—figure of the plant, No. 521.

An annual, pentandrous, umbelliferous plant, native of Egypt, cultivated in Malta and Spain, and in gardens elsewhere. the seeds from Spain are smaller than the others, yield more oil, and are preferable.

An aromatic—called carminative—supposed, absurdly, to possess the power of promoting the secretion of milk—given in substance, bruised—dose, grs. x to ʒij.

Offic. Prep. *Oleum Anisi.* L. E. D. & U. S. *Spiritus Anisi.* L.

No. 423.—Pimentæ Baccæ. Common Allspice, or Jamaica Pepper—the fruit of *Myrtus Pimenta*, which see.

No. 424.—Pinus.

Cl. 21. Ord. 8. *Monoecia Monadelphia.* Nat. ord. *Coniferæ.*

Eight species, yielding the Terebinthinate products of Materia Medica:—

1. PINUS ABIES, (*Abies rubra.*) Yellow-leaved Fir—Norway Spruce Fir. Yields common Frankincense, by spontaneous exudation and incision—tops used to make spruce-beer.

Cabinet specimen, Jeff. Coll. No. 522—figure of the tree, No. 523.

2. PINUS BALSAMUM. Balm of Gilead Fir. Yields Canada Balsam; highly fragrant.

Cabinet specimen, Jeff. Coll. No. 524—figure of the tree, No. 525.

3. PINUS LARIX. Larch. Exudes Orenburgh Gum, and Briançon Manna—also, by boring, common Venice Turpentine.

Cabinet specimen, Jeff. Coll. No. 526—figure of the tree, No. 527.

4. PINUS SYLVESTRIS. The wild Pine, or Scotch Fir. Yields common Turpentine. Inner bark esculent, raw or baked into cakes. Tar distilled from it; lampblack obtained by burning it.

Cabinet specimen, Jeff. Coll. No 528—figure of the tree, No. 529.

5. PINUS CEMBRA. Yields the fine-scented Briançon Turpentine—its shoots, by distillation, the genuine Riga Balsam.

6. PINUS PICEA. Yields Strasburg Turpentine, by puncturing the small vesicles of bark which contain it—and common Turpentine, by larger incisions.

7. PINUS CANADENSIS. Hemlock Spruce. Yields Hemlock Turpentine, called Hemlock Gum.

Cabinet specimen, Jeff. Coll. No. 530—figure of the tree, No. 531.

8. PINUS PALUSTRIS, and some other species producing the *Terebinthina empyreumatica*, or impure turpentine, procured by burning, called *Pix liquida*, or common *Tar*.

The whole of the extensive natural family *Coniferæ*, yield turpentines of different qualities and effects; some being purely balsamic, while others are stimulating, and highly rubificient. The true Terebinthus of the ancients, is not obtained from the genus *Pinus*, or *Abies*, but from the *Pistachia Terebinthinus*; its concrete is called Chio or Cypress Turpentine. All the terebinthinate products however, called *Terebinthina*, by the Colleges, are characterized by a certain similitude of generic quality, if I may speak thus; but as we use for medical purposes, certain preparations of them, I shall here briefly enumerate them, referring you to the Cabinet specimens, for better information, on the peculiarities of each, than description can give; and to the details of the lectures, for an exposition of the peculiar medical virtues, effects, and uses, of the whole.

1. *Terebinthina Canadensis.* From species No. 2; called Canada Balsam; *Resina liquida.* Canada Turpentine.

2. *Terebinthina Chia.* Cypress Turpentine, from *Pistachia*, which see.

3. *Terebinthina vulgaris.* Common Turpentine; Horse Turpentine—from species No. 4.

4. *Terebinthina Venita.* Venice Turpentine—from species No. 5.

5. *Terebinthina Argentoratensis.* Strasburg turpentine, from species, No. 6.

6. *Hemlock Turpentine.* A dark terebinthinate exudation, from the tree which produces hemlock scantling: and which is extensively used, in the United States, instead of Burgundy pitch, as a rubificient. The cabinet specimen, is from Silver Lake, where a good deal of it is collected, as well as in the Eastern States.

7. *Pix abietis.* The *resina praparata*, of species No. 1, called Burgundy pitch.

The turpentines may be either made into pills, with powdered liquorice-root, or suspended in water by yolk of egg, or mucilage of acacia; ℥j requires one yolk, or ℥ss acacia gum. Dose of all, grs. x to ℥j.

TEREBINTHINÆ OLEUM. L. E. D. & U. S. Oil of Turpentine—(called Spirit of Turpentine.)

This is an essential oil, distilled from common turpentine; is limpid, colourless; specific gravity .794, of strong, penetrating, peculiar odour; the volatile vapour causing the eyes to smart, if exposed to it.

MEDICAL PROPERTIES AND USES. An invaluble medicine; diuretic in small doses, say, f℥j or f℥ij; purgative, and discharging tape worm dead, in doses of f℥j or f℥j; is safest in *large* doses: has been used in epilepsy, gout, sciatica, in diseases of the kidneys, originating from ulceration and obstruction: in puerperal fever, in yellow fever, to allay gastric irritability; by John Hunter, as a styptic in almond emulsion, for internal haemorrhages; externally as a vehement rubefacient in croup, rheumatism, &c.; as a stimulating liniment in lesions of tendons, and contusions, in clyster, for tympanites and flatulent colic, and constipation; boiled with Spanish flies, as a quick, intense blister: mixed with almond oil, and dropped on cotton, to be stuffed in the ears, for deafness, depending on a morbid state of the glands secreting the wax; and for various other purposes. It is best given in the manner of castor oil, floating on alcoholic fluids, or coffee; as a diuretic electuary, may be given in doses of ♏x to f℥j. It affects the head, when given freely, by a species of intoxication, or hallucinative excitement, without hilarity.

OFFIC. PREP. *Linimentum Terebinthinæ.* L.

Formulæ—

No. 1. ℞ Terebinthinæ olei, f℥ij
Melis Despumati, ℥j
Pulv. Rad. Glycyrrhizæ, q. s.

Make a linctus—a tea-spoonful, night and morning, with a draught of some weak tepid fluid, after each dose. Aromatic stimulant—in sciatica.

No. 2. ℞ Terebinthinæ olei, f℥iss
Olei olivæ, f℥iss
Acidi. Sulph. dilut f℥ij

This is the Gregorian embrocation for rheumatism.

A mixture of oil of turpentine, tinct. guaiacum, spirit of nitric ether, and small portions of oil of amber, and cloves, is a nostrum, sold under the name of "Dutch Drops," and "Haerlem Drops"—

No. 425.—Piper. Pepper.

Cl. 2. Ord. 3. *Diandria Trigynia.* Nat. ord. *Piperitæ*, Linn. *Urticæ*, Juss.

Species—

1. PIPER NIGRUM. Common black pepper; a well known condiment.

Cabinet specimen No. 532, is for comparison with cubebs, figure of the plant, No. 533.

OIL OF BLACK PEPPER.

Cabinet specimen, Jeff. Coll. No. 534.

Discovered by Pelletier, in his analysis. Is obtained in the preparation of *Piperine*, by adding water and muriatic acid to an alcoholic solution of pepper, concentrated by evaporation. It possesses, in a very concentrated state, the heat and acrimony of the pepper; and from its sensible properties, will doubtless prove useful in practice. Is a good subject for an inaugural thesis. Mr. Carpenter has prepared it.

2. PIPER LONGUM. Long pepper.

Cabinet specimen, Jeff. Coll. No. 535—figure of the plant, No. 536.

Properties, in every respect, similar to species 1.

3. PIPER CUBEBA. Cubeb.

Officinal. *Cubebæ.* Cubebs, of the Colleges.

Cabinet specimen, Jeff. Coll. No. 537—figure of the plant, No. 538.

Diuretic and purgative—used in gonorrhœa and gleets, which is an ancient oriental practice. Dose, in powder, ℈j to ʒiss, 4 times a day; in tincture, made of ʒiij bruised cubebs, in ℥j rectified spirit of wine, f ʒj in water, 3 or 4 times a day. Cubebs have been used for the past two years, by Mr. Roux, in *purulent ophthalmia*, produced by gonorrhœal poison, with advantage; his dose, ʒj powdered, 3 times a day. M. Velpeau, has administered Cubebs by the rectum, in gonorrhœa, with favourable results—he was led to this, by his success in using Balsam Copaiba in this manner. A combination of this latter medicine, with oil of Cubebs, has been much used by the mouth, in the same disease. According to Vauquelin, Cubebs contain a volatile and almost concrete oil, resembling that of copaiva, a resin in small proportion, extractive, and some saline substances. Mr. G. W. Carpenter says, in a note to me: "I have obtained a resinous fixed oil, by the means of sulphuric ether, which has been found much more active than that obtained by distillation."

No. 426.—Piperia. Piperine.

Cabinet specimen, Jeff. Coll. No. 539.

A proximate principle, discovered by M. Pelletier and Mr. Oerstadt, in black pepper; it crystallizes from the green oil, in acicular crystals, in radiating groups; it is soluble in alcohol and ether; insoluble in cold, and sparingly soluble in hot water. Piperine, when perfectly free from oil and resin, is colourless, transparent, and insipid; it appears to be much more active, when united with the portion of oil and resin, with which it is combined in its first crystallization. It has been employed as a febrifuge tonic medicine, in intermittent and typhus fevers, and has been used also in periodical head-aches; its dose, from one to three grains. It is a very active medicine, and has been considered by M. Meli fully equal, if not superior, to the quinine, in the same doses. See Materia Indica, Vol. I. page 622; also, Bulletin des Sciences Médicales, No. 4, Avril, 1826, page 364.

The above article has been manufactured by Mr. George W. Carpenter, of Philadelphia, and is now in the hands of several physicians, who are about to administer it, for the purpose of more fully investigating its medical properties.

No. 427.—Pistachia.

Cl. 22. Ord. 5. *Diœcia Pentandria.* Nat. ord. *Amentaceæ* Linn. *Terebintaceæ*, Juss.

Species 1.—PISTACHIA TEREBINTHUS. Chian Turpentine
(See No. 424.)

Officinal. *Terebinthina Chia.* Lond. Chian Turpentine.

This tree is a native of Barbary and the South of Europe.

Species 2.—PISTACHIA LENTISCUS. Lentisk or Mastick tree.

Cabinet specimens, Jeff. Coll. No. 540—figure of the tree, No. 541.

Officinal. *Mastiche.* Lond. *Pistachiæ Lentisci resina.* Edin. Mastic.

Only used in dentristry, to fill the cavities of carious teeth, too much decayed to hold metal—and in the arts, to make a beautiful transparent varnish, with which all the paintings in the Cabinet, not glazed, are covered; it requires previous covering of fish glue size, to protect the paper

No. 428.—Pix arida. L. *Pix Burgundica.* E. D.

Burgundy pitch, the prepared concrete of species 1, No. 424, which see.

No. 429.—Pix liquida. L. E. D. & U. S. Tar—See species 4, No. 424, from which, with species 8, of same No., it is obtained.

No. 430.—Plumbum. Lead. Its salts only used—*Plumbi Sub-carbonas.* L. *Carbonas Plumbi*, vulgo, Cerussa. E. *Cerussa, sub-acetas Plumbi.* D. *Cerusse*, or white lead.

Cabinet specimen, Jeff. Coll. No. 542.

Only used externally, and injudiciously, if not dangerously, to sprinkle over excoriated surfaces of the skin—very improper practice, in the chafings of babies; which nurses will do if not watched.

Offic. Prep. *Unguent. Cerussæ.* D. *Plumbi super-acetas.* L. E. D.

No. 431.—Plumbi oxydum semi-vitreum. L. E. *Lithargyrum.* D. Litharge.

Cabinet specimen, Jeff. Coll. No. 543.

Only used in pharmacy, in making *Emplast. Plumbi*, of the Colleges, and *Ceratum Saponis.* L.

No. 432.—Plumbi super-acetas. L. (*Cerussa acetata.* P. L. 1787. *Saccharum Saturni*, 1745.) *Acetas Plumbi.* E. D. Vulgo, Sugar of Lead.

Cabinet specimen, Jeff. Coll. No. 544.

Qualities. Irregular masses, resembling lumps of sugar, being aggregated acicular 4-sided prisms, terminated by dihedral summits, which are slightly efflorescent—taste sweet and astringent; called a *super-acetate*, but seems to be a neutral salt; soluble in 25 parts of hot or cold water; soluble in alcohol; for incompatible substances, see Tables at end of Vol. I.

Medical Properties and Uses. Sedative, a highly valuable medicine, being capable of effecting various sanative purposes, according to its mode of exhibition—checks uterine hæmorrhage, and hæmoptisis, internally given; externally, its effects well known, in the familiar application of lead water to inflammations of all kinds. From extensive and bold use in this article, for many purposes, which will be detailed in the lectures, I set at nought the overweening caution of M. Gaspard, who thinks the salt can never be given in any dose, without risk, unless so

combined as to be decomposed; occasionally, requires to be combined or administered with a little opium. Dose, in pill, gr. ss, to gr j, abstaining from drink, except water, or water acidulated with vinegar, for an hour after taking it.

Offic. Prep. *Ceratum Plumbi, super-acetatis.* L.

According to Paris, the pretended prophylactic, against venereal virus, called "Royal Preservative," is a solution of super-acetate of lead.

Formula— ℞ Plumbi Super-acetatis, grs. iij
Opii Puri, gr. i
Extracti Conii, gr. x

Make into 3 pills—one may be taken twice a day, drinking after each, vinegar and water. Astringent.

No. 433.—Podophyllum peltatum. May Apple.

Officinal. *Radix.* The root. Phar. U. S.

Cabinet specimen, Jeff. Coll. No. 545—figure of the plant, No. 546.

A cathartic called often, American Jalap—for a full account, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. I, plate 25.

No. 434.—Polygonum Bistorta. Radix—the root called *Bistort.*

Cabinet specimen, Jeff. Coll. No. 547—figure of the plant, No. 548.

Officinal, by the London, Dublin, and Edinburgh Colleges, for its astringent tonic quality. Dose of the powdered root, grs. xv to ʒj, twice or thrice a day—not used in the United States.

No. 435.—Polygala Senega.

Officinal. *Radix* Senega snake root. Phar. U. S. and the Colleges.

Cabinet specimen, Jeff. Coll. No. 549—figure of the plant, No. 550.

An indigenous plant, of various properties, all evidencing its stimulant power—it pukes, nauseates, and is therefore expectorant; it purges, and is therefore emmenagogue, is diaphoretic, and therefore helps its expectorant and emmenagogue effects. Dr. Hartshorne, and Dr. Chapman, have found it emmenagogue. I have often given it with this view, and when it purged actively, was successful; it is an improper medicine in inflammatory diseases—and *what kind* of croup Dr. Archer found it effectual in, I am at a loss to divine—trust it not. I most earnestly

enjoin you never to think of it in that disease, properly so called—trust to nothing but the lancet, emetics, calomel, and turpentine externally to the throat.

Dose of powdered Senega, ℈j to ʒss, as an emetic—of the decoction, made by boiling ʒj of the contused roots in Oj of water, ʒss every 2d or 3d hour, *pro re nata*.

Offic. Prep. *Decoctum Senegæ*, of the Colleges.

For a full account, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. I. plate 36.

Species 2.—POLYGALA RUBELLA. See Bigelow's Med. Bot. A good subject, as any of the species of the genus would be, for an inaugural thesis. The indigenous species are very numerous, and have not been investigated.

No. 436.—Populus Balsamifera. Carolina Poplar.

Cabinet specimen, Jeff. Coll. No. 551—figure of the tree, No. 552.

Yields the resin or balsam, called American Tacamahaca—the buds are coated with a thick resin; infused in oil, they make a balsamic oleaginous application to cuts and wounds.

No. 437.—Potassa Fusa. L. *Potassa*. E. *Kali Causticum*. D. (*Lapis Infernalis*, P. L. 1720.) Common Caustic.

Cabinet specimen, Jeff. Coll. No. 553.

Called the Vegetable Caustic, and Caustic Potash. Used as a powerful escharotic—never *internally*, as the Lunar Caustic is.

No. 438.—Potassæ Acetas, of the Colleges.

Cabinet specimen, Jeff. Coll. No. 554.

Qualities. In masses of a foliated, laminar texture, very deliquescent, odour slight and peculiar, and having a sharp pungent taste—fʒj distilled water, at 60° F. dissolves 404 grains, or 100 parts are soluble in 105 of water—the solution undergoes spontaneous decomposition; soluble in 4 times its weight of alcohol; consists of one proportional of each of its components, i. e. 45 potass, 48 acetic acid.

Medical Properties and Uses. In doses of ℈j to ʒj, diuretic; in doses of ʒij to ʒiij, laxative.

Formulæ—

No. 1. ℞ Potassæ Acetatis, ʒj
Oxymel. Colchici, fʒij
Rubbed together with
Aquæ puræ, fʒj
Spir. Juniperi comp. fʒss

Make a draught—to be taken twice a day. Diuretic.

No. 2. ℞ Infus. Digitalis, f℥iv
Potassæ Acetat. ℥j
Tinct. Opii, ♏v
Make a mixture—dose, a table-spoonful, twice or thrice a day. Diuretic.

For No. 3, see Formula ℞ 3, No. 357.

No. 439.—Potassæ sub-carbonas impurus. U. S. Impure sub-carbonate of Potass, called Pearl Ash. *Potassæ sub-carbonas.* L. E. *Sub-carbonas kali.* D. (*Kali præparatum*, P. L. 1787. *Sal Absinthii—Sal Tartari*, 1745.)

This salt has also been called salt of wormwood, salt of tartar, &c. according to its mode of preparation.

Qualities. In white coarse grains, so exceedingly deliquescent, that when exposed to air, it liquefies into a thick solution; consists of one proportional of acid, one of potass, with variable quantities of sulphate of potass, muriate of potass, siliceous earth, alumina, together with the oxides of iron and manganese; soluble in twice its weight of water, any residuum being impurity; insoluble in alcohol; makes soaps with oils.

Medical Properties and Uses. Antacid, diuretic; chiefly used for pharmaceutical purposes, and in making draughts; is less pleasant than No. 440. Dose, grs. x to ℥ss.

Offic. Prep. *Potassæ Acetas.* L. E. D. & U. S. *Liquor Potassæ.* L. E. D. & U. S. *Potassæ Sulphuretum.* L. E. D. *Potassæ Tart.* L. E. D. & U. S. *Liquor Arsenicalis.* L. E. D. & U. S. The *Sub-carbonas Potassæ purissimus*, E. is the purest salt, obtained by incinerating cream of tartar; yet it generally contains lime.

Formulæ—

No. 1. ℞ Potassæ sub-carbonatis, grs. x
Infusi Gentianæ comp. f℥iss
Spr. Ætheris comp. f℥ss
Tinct. Cinnamomi, f℥j
Make a draught. Diuretic.

No. 2. ℞ Potassæ sub-carbonatis, ℈j
Succi Limonum, f℥ss vel q. s.
Aquæ Cinnamomi, f℥j
Aceti Scillæ, f℥iss
Tinct. Opii, ♏v
Syrupi Aurantii, f℥ss
Make a draught, to be taken once or twice a day. Diuretic.

No. 3. ℞ Pulv. Antimon. grs. iij
Potassæ sub-carbonatis, grs. v
Anthemidis flor. exsiccat. ℈j

Make a powder, to be taken *pro re nata*. Diaphoretic

No. 440.—Potassæ Carbonas. L. E. Carbonate of potass.

Cabinet specimen, Jeff. Coll. No. *555*.

In crystals, which are four-sided prisms, permanent in air, of a slightly alkaline taste, but without acrimony. It is a *bi*-carbonate, consisting of two proportionals of carbonic acid and one proportional of potass; and in its crystalline form, contains water of crystallization, equal to one proportional: soluble in four parts cold, and five-sixths of its weight of boiling water, in which it is partially decomposed, during which it liberates carbonic acid; insoluble in alcohol.

The Sal Æratus, so much lauded for dyspepsia, is no more than an impure bi-carbonate of potass, and differing from the above, being uncrystallized. It is made by exposing pearl-ash in a basket, over a brewer's vat, while *brewing*—by which the sub-carbonate of potass (pearl-ash) acquires an excess of carbonic acid.

Both are medicinally identical. Used in disordered digestive functions, and in calculous affections, as antilithics. Dose, grs. x. to ℈ss and ℥j. dissolved in a glass of water, and taken a short time before meals. An excellent medicine, as I know from experience in my own person and in practice.

Formulæ—

No. 1. ℞ Potassæ Carbonatis, grs. x
Misturæ Camphoræ, f℥j

Make a draught with lemon-juice—a table-spoonful to be taken during effervescence. Diaphoretic, antidyspeptic.

No. 2. ℞ Misturæ Amygdal. f℥j
Potassæ Carbonatis, grs. x
Syrupi Rhœados, sive
—— Sambuci, f℥j

Make a draught with one table-spoonful of lemon-juice—to be taken during effervescence. Febrifuge.

No. 441.—Potassæ Nitras. L. E. & U. S. *Nitrum*. D. Nitre, or Saltpetre.

Cabinet specimen, Jeff. Coll. No. 556.

QUALITIES. In crystals of six-sided prisms, terminated by dihedral summits, of a bitter sharp taste, imparting the sensation of coldness. Consists of one proportional of nitric acid, and one of potass; dissolves in 7 parts of water, at 60° F. and in its own weight at 212°; its solubility increased by adding common salt; solution attended with considerable reduction of temperature; insoluble in alcohol.

MEDICAL PROPERTIES AND USES. Sedative, somewhat diuretic; chiefly employed in combinations of medicines. Dose, grs. x to xv, to act on the kidneys; in grs. xxv to ℈j aperient. In over doses, excites vomiting, urinous taste in the mouth, constriction of the fauces, bloody-stools, convulsions, and death. Its poisonous effects have frequently been evidenced in the mistakes which have arisen in taking it for glauber salts. I have had one case of this kind, in Mr. Hazelhurst's family, in this city, where an ounce had been taken in solution. I recovered the man, by giving him *several gallons* of water sweetened with more than a pound of brown sugar.

Formulæ—

No. 1. See Formula 3, of No. 330.

No. 2. ℞

Scillæ radicis exsiccat,	grs xij
Potassæ nitratis,	℥j
Sacchari purificati, et	
Cinnamomi cort. contrit,	āā ℥j

Make a powder, and divide into 6 equal parts—one twice a day. Diuretic.

No. 3. ℞

Potassæ nitratis,	℥j
Misturæ Ammoniaci,	f℥vj
Spir. Juniperi comp.	f℥iss
Aceti. Scillæ,	f℥vj

Make a mixture—a table-spoonful the dose, every 4th or 6th hour. Diuretic.

No. 4. ℞

Cetacei	℥ij
Pulv. Traga. comp.	℥j
Syrup. papaveris vel sambuci,	
Syrup. Tolu.	aa f℥j
Confect. Ros.	℥vj
Potassæ Nitratis,	℥ss

Make an electuary, of which, a portion, the size of a nutmeg, is the dose, for cartarrh and cough.

No. 5. ℞

Potassæ Nitratis,	℥j
Antimoni Tartarizat.	gr. ss
Aquæ Ferventis,	f℥iij
Syrupi Limonum,	f℥j

Make a *mixture*, a table-spoonful the dose, every 2d hour, in fevers and pneumonia.

Thomas T. Hewson.

SAL PRUNELLÆ.

Cabinet specimen, Jeff. Coll. No. 557.

Called also *Lapis Prunellæ*, and sore throat salt; is made by melting 1lb of nitre, injecting gradually upon it, ℥ij flowers of sulphur, and pouring it into moulds, either balls or cakes, as in the cabinet specimens. It is an old preparation, and was much valued as an application either in substance or in gargle, to cynanche trachealis.

No. 442.—Potassæ sulphas. L. E. *Sulphas Kali.* D. (*Kali vitriolatum.* P. L. 1787. *Tartarum vitriolatum*, 1745 and 1720. *Sal Duobus*, &c.)

The crystals in rectangular prisms, modified on the edges and angles—or double 6-sided pyramids, with short intervening prisms, which are *macles*, or hemetrope crystals. Slightly efflorescent, and decripitate by heat; f ℥j of water, dissolves only 24 grains. Not useful as a purgative, being so hard and insoluble; usually given, when administered, which is not often, combined with rhubarb, or other purgative powder. Dose, grs. x to ℥ss.

Offic. Prep. *Pulvis Ipecacuanhæ comp.* L. E. D. & U. S.

Formula— ℞ Sabinæ foliorum exsiccat, Zingiberis rad. contus, āā ℈ss; Potassæ sulphatis, ℥ss.

Make a powder, to be taken twice a day, for suppressed catamenia.

The Edinburgh College still retains a salt, under the name of *Sulphas Potassæ cum sulphure*, (formerly *Sal Polychrest*; salt of many virtues)—it is produced by deflagrating nitre with sulphur, in a red-hot crucible. The product contains, besides sulphate of potass, *bi-sulphate* and *sulphuret of potass*. It is not in any way superior to the preceding, and has been very judiciously left out of the Phar. U. S.

No. 443.—Potassæ super-sulphas. L. (*Sal Enixum* of commerce.)

Cabinet specimen, Jeff. Coll. No. 558.

In long hexangular prisms, of a sour slightly bitter taste; is a *bi-sulphate*, consisting of 2 proportionals of acid and one of the alkali—soluble in twice its weight of water, as well as in alcohol; more soluble, and more active than the sul-

phate; generally combined with a purgative, as rhubarb, in a solid form. Dose grs. x to ʒij.

Formula— ℞ Pulvis Rhei, grs. xv
Potassæ Super-sulphat, grs. x
Aquæ Cinnamomi, fʒj
Make a draught. Cathartic.

No. 444.—Potassæ sulphuretum. L. E. *Sulphuretum Kali.* D. (*Kali Sulphuretum.* P. L. 1787. *Hepar Sulphuris.*)

Cabinet specimen, Jeff. Coll. No. 559.

A hard brittle mass, of a liver-brown hue, whence the old name *hepar*—of an acrid bitter taste; inodorous when dry, but when wet, intolerably offensive, giving out the odour of bilge-water. It consists of sulphur, potass, and a proportion of carbonic acid—soluble in water, undergoing decomposition into hydroguretted sulphuret, and sulphate of potass.

Medical Properties and Uses. It is of no further use, than to enable us to give sulphur in a form soluble in water; used in cutaneous affections, in gouty and rheumatic diseases; in solution for the itch of infants.

Formula— ℞ Potassæ sulphureti, grs. xv
Saponis duri, ʒj
Balsam. Peruvianæ, q. s.
Make 30 pills—3 the dose, with warm infusion of Juniper berries, in cutaneous affections. Diaphoretic.

No. 445.—Potassæ super-tartras. L. E. & U. S. *Tartarum Crystalli.* E. Super-tartrate of Potass—Crystals of Tartar.

Cabinet specimen, Jeff. Coll. No. 560.

In small irregular brittle crystals, which when pulverized are called cream of tartar; taste harsh, acid, peculiar, being generally recognised with ease by tasting. Is a *bi-tartrate*, consisting of 2 proportionals of acid, and one of potass. Requires 120 parts water, at 60° F. and 30 parts at boiling heat, to dissolve it—somewhat soluble in alcohol.

Medical Properties and Uses. Well known—is a hydragogue cathartic, producing an influx of serous fluids into the bowels; hence, united with jalap, it is an important hydragogue in drop-ies; in small doses, diuretic. The formula of the Codex Medicamentarius of Paris, noticed among the preparations below, is directed on account of the increased solubility of the salt, by its union with bora-

cic acid. It directs that 30 parts boracic acid, and 20 distilled water, be heated together, in a silver vessel; 120 parts super-tartrate of potass are then added, in divided portions, shaking the mixture continually; when the whole will soon liquefy; and by continuing the heat, a pulverulent mass will be formed. Dose of super-tartrate potass as diuretic ℥j, frequently repeated; as a cathartic, ℥iv to ℥vj. The South American physicians use this salt perpetually in their practice. I have had many of them as patients for some years past, and they always asked to have it administered, attaching great importance to its effects; adulterated often with No. 443; may be known by the greater solubility of the sophisticated article.

Offic. Prep. *Pulvis Jalapæ comp.* L. E. D. & U. S. *Pulv. Scammoniæ.* E. *Pulvis Sennæ comp.* L. *Ferrum Tartarizatum.* L. *Antimonium Tartarizatum.* L. E. D. & U. S. *Soda Tartarizata.* L. E. D. &. U. S. *Tartarus acidulus potassæ solubilis, admixto acido boracico.* Codex Med. Paris.

Formula— ℞ Potassæ super-tartratis, ℥j
Pulveris scillæ exsiccat, gr. iij
Pulveris Zingiberis, gr. v

Make a powder—to be taken once, twice, or thrice a day. Diuretic.

No. 446.—Prinos verticillatus. Black Alder.

Cabinet specimen, Jeff. Coll. No. 561—figure of the root, No. 562.

Officinal. *Cortex.* Phar. U. S. The root of Black Alder, antiseptic, astringent, tonic. For a full account, see W P. C. Barton's Veg. Mat. Med. U. S. Vol. II.

No. 447.—Prunus Domestica. Common Plumb tree.

Officinal, by some Colleges, *Pruna*; the fruit called *Prunes*: laxative, when boiled or stewed—less so, uncooked.

Offic. Prep. *Confectio Sennæ.* L. E. D.

No. 448.—Prunus Virginiana, } Wild Cherry
——— Serotina, } trees.

Officinal. *Cortex.* The bark. Pharm. U. S. and Ives's ed. Paris's Pharm.—The bark of the trees and the root.

Cabinet specimen, Jeff. Coll. No. 563—figures of the trees, No. 564 and No. 564*.

Sub-sedative or narcotic, and tonic; used as a succedaneum for Cinchona, and, on account of its effect in lessening the force of the circulation, when managed with that view,

has been used in hectic and other febrile wasting diseases; said to be useful in consumption; contains hydrocyanic acid. Dose, ℥j to ℥ij of the powdered bark—of the infusion ℥ij to ℥iv.

PRUNUS LAURO-CERASUS. Cherry laurel; yields hydrocyanic acid and laurel water.

No. 449.—PTEROCARPUS.

Cl. 17. Ord. 4. *Diadelphia Decandria.* Nat. ord. *Papilionaceæ.*

Species 1—PTEROCARPUS SANTALINUS. Red Saunders tree.

Cabinet specimen, Jeff. Coll. No. 565.

Produces the officinal red saunders, used in pharmacy, as a colouring ingredient.

Species 2—PTEROCARPUS ERINACEA.

Officinal, *Kino*, of the Colleges.

Cabinet specimen, Jeff. Coll. No. 566.

The inspissated juice of *Eucalyptus resinifera*, is assumed by the Edinburgh College, as the tree which yields *Kino;* the Dublin considers it the product of the *Butea frondosa.* There is little doubt, that it is the product of the *Pterocarpus erinacea.*

M. Virey, in a note read to the Royal Academy of Medicine at Prague, concerning the origin of Gum Kino, has shown that the first Gum Kino, which was known, and used by Fothergill & Cullen, came from Gambia, or from Egypt, and that it was obtained in Senegal, and in Senegambia, from the *pterocarpus echinata.* He states also, that the name of this plant was found by Robert Brown, among the dried specimens of Mungo Park, brought from Africa. This species of Gum Kino, which resembles dragon's-blood extracted from the *pterocarpus draco*, is not the variety which is usually found in commerce; this being brought from both the Indies, as well as from New-Holland, though that which comes from the latter country is obtained from some *rubiaceæ*, *nucleæ*, and also from some species of acacia. (*Estratto delle sedute dell' Accademia Reale di Medicina di Paragi, Aprile*, 1827.)

A sort of Kino is said to be made in Jamaica, being the extract of the *cocoloba uvifera*, or sea-side grape. This is the opinion of Dr. Duncan, junr: Dr. Murray, however, says, he has been informed that the Jamaica sort is the extract of the wood of mahogany. "The Kino which comes from India, is the extract of the *Nauclea Gambi.* It is imported in chests, containing from 1 to 2 cwt. and on the inside of

the lid of each chest, is a paper, inscribed with the name of John Brown, the month and year of its exportation, and stating that it is the *produce of Amboyna.*" *Thompson.* The other kinds are—1. African Kino, 2. Botany Bay Kino, 3. Jamaica Kino, (not now to be had, according to Thompson,) 4. East India, or Amboyna Kino. All powerfully astringent, like *catechu.* Dose, in substance grs. x to ℥ss, of the infusion f℥iss, of the tincture f℥j.

Offic. Prep. *Tinctura Kino.* L. E. D. & U. S.

No. 450.—Punica Granatum. Pomegranate.

Cl. 12. Ord. 1. *Icosandria Monogynia.* Nat. ord. *Pomaceæ,* Linn. *Myrtæ,* Juss.

Cabinet specimen, Jeff. Coll. No. 567—figure of the plant, No. 568.

Officinal. *Granati Cortex.* Lond. *Granatum; flores, pericarpii Cortex.* Dub. Pomegranate bark and flower—*Granatum, Cortex, fructus.* U. S.

The bark of the fruit of Pomegranate—native of the South of Europe, Barbary, Asia; naturalized in the West Indies; cultivated in the United States, in green-houses, but stands the winters in borders. Astringent—Dose, ℈j to ℥j in powder; of a decoction made with ℥iv of the bark, and f℥vi of water—f℥vi every 3d or 4th hour.

PYRETHRI, Radix—see No. 56.

No. 451.—Pulveres. Powders, of the Colleges.

The chief important combinations, under this title, are—

1. *Pulvis Aloes comp.* L. *P. Aloes cum Guaiaco.* D. Dose, grs. x to ℈j.

Formula— ℞ Pulv. Aloes comp. ℥j
Pulv Antimon. gr. v
Saponis Duri, gr. x
Decoct. Aloes comp. q. s.

Make into 20 pills—2 a dose, to promote a healthy regularity of the bowels.

2. *Pulvis Aloes cum Canella.* Dose grs. x.—℈j; called *Hiera picra.*

3. *Pulvis Antimonialis.* A succedaneum of James's Powder.

No. 1. See Formula 3, of No. 318.

No. 2. ℞ Pulv. Ipecacuanhæ comp. grs. xv }
Pulv. Antimon. grs. ij }

Make a powder, to be taken at bed-time, followed by a draught of warm tea. Diaphoretic.

No. 3. See Formula 5, of No. 235.

No. 4. See Formula 3, of No. 439.

No. 5. See Formula 2, of No. 330.

4. *Pulvis Cinnamomi compositus*—used to give aromatic warmth to other preparations, as for example in Pulvis 1, above.

5. *Pulvis Contrajervæ comp.* Dose, grs. x to lx. Stimulant; diaphoretic.

6. *Pulvis cornu usti cum opio.* Ten grains contain one grain of opium.

7. *Pulvis Cretæ comp.* Dose, grs. v to ℈j.

8. *Pulvis Cretæ comp. cum opio.*

Formula— ℞ Pulv. Cretæ cum opio, ℈j
Pulv. Extract Catechu, grs. xv } }

Make a powder, to be taken after each evacuation. In Diarrhœa depending on acidity.

9. *Pulvis Ipecacuanhæ comp.* Dover's Powder—Dose, grs. v. to ℈j, in bolus or gruel.

Formulæ—

No. 1. ℞ Pulveris Ipecacuanhæ comp. grs. xv }
Pulv. Tragacanth. comp. ℈ij }

Divide into 4 equal parts—one every hour. Diaphoretic.

No. 2. ℞ Guaiaci gum-resinæ, grs. x }
Pulv. Ipecacuanhæ comp. grs. v }
Confect. Rosæ, q. s. }

Make a bolus, to be taken at bed time. Diaphoretic.

10. *Pulvis Scammoniæ comp.*

11. *Pulvis Tragacanthæ comp.* See Formula 1. Pulvis No. 9, above.

Powders should be kept in opake green glass-stopper bottles, being affected by light and air.

Q.

No. 452.—Quassia. The Quassia tree.

Cl. 10. Ord. 1. *Decandria Monogynia.* Nat. ord. *Gruinales,* Linn. *Magnoliæ,* Juss.

Species 1—QUASSIA SIMAROUBA. Simarouba Quassia, Mountain Damson, (in Jamaica.)

Cabinet specimen, Jeff. Coll. No. 569—figure of the tree, No. 570.

Officinal. *Simaroubæ Cortex.* Lond. *Quassiæ Simaroubæ Cortex.* Edin. *Simarouba; Cortex, lignum.* Dub. Sima

:ouba bark and wood—*Quassia Simarouba, Cortex.* U. S. Simarouba bark.

Native of South America, and the West Indies.

Qualities. Bark inodorous, bitter, not disagreeable taste—water and alcohol take up all its virtues, at 68° F. better than at boiling heat.

Medical Properties and Uses. Tonic, perhaps a peculiar one—I have used it frequently, particularly at sea, in dysenteric diseases, with more advantage than any other tonic; first introduced in Paris in 1713, as a remedy for that disease. Is used also in diarrhœa and dyspeptic affections. Dose, in substance, ℈j to ℥ss; best given in infusion, which is the commonest form.

Offic. Prep. *Infusum Simaroubæ.* L. & U. S.

Species 2—**QUASSIA EXCELSA.** Lofty Quassia.

Cabinet specimens, Jeff, Coll. Nos. 571 and 572—figure of tree, No. 573.

Officinal. *Quassia Lignum.* E. D. L. & U. S. The wood of Quassia, (called Quassia.)

Native of Jamaica, and the Caribbean Islands, where it is called Bitter Ash.

Qualities. Inodorous and intensely bitter, wine-yellow. Alcohol and water extract its bitterness, and evaporated to dryness, leaves a brown-yellow sub-transparent brittle extract, called *Quassin*, being considered a peculiar proximate principle of the wood, embodying its bitterness. Mr. A. T. Thompson is of opinion it contains resin.

Medical Properties and Uses. A pure intense bitter tonic, used in every case where such a medicine might be proper—it is extensively prescribed every where, and is kept in the shops in shavings, raspings, or saw-dust. I do not think it ought ever to be given in substance—infusion, or decoction, is the best form. The tincture is admissible where the vinous or alcoholic menstruum may not be prejudicial. Mr. A. T. Thompson says, he found it serviceable combined with nitric acid, in typhus and in fluor albus. This union I have not used in those diseases, but have in numerous others; and to restore tone to the system in tedious convalescence from fevers, I have found nothing equal to this combination. With cretaceous powder, and ginger, it has been given for gout—℥j or ℥ij of the raspings, will be sufficient for ℔ij water, in decoction, and for ℔jss in infusion. A wine-glass full, the dose of either—very strong, it is apt to prove intolerable to the stomach.

Offic. Prep. *Infusum Quassiæ.* L. & U. S. *Tinctura Quassiæ.* E. D. & U. S. *Infusum Quassiæ cum sulph. Zinci.* U. S.

QUINA. Quinine. See No. 169.

No. 453.—QUERCUS. Oak.

Cl. 21. Ord. 6. *Monoecia Polyandria.* Nat. ord. *Amentaceæ*

Species 1—QUERCUS INFECTORIA OLIVIER, } Dyer's oak.
Synonym—Quercus cerris.

OFFICINAL. *Gallæ.* Galls of the Colleges—Gall-nuts.

Cabinet specimen, Jeff. Coll. No. 574.

This species grows throughout all Asia; is seldom more than six feet high; the leaves are smooth, obtusely toothed, and of a bright green colour on both sides; it has an elongated acorn, two or three times longer than the cup, which is sessile, downy, and scaly; the gall comes out at the shoots of the young boughs; those that come out first, according to Virey, are best; they are called in commerce blue, black, or green—those afterwards gathered, are inferior, being pierced, and are called white galls.

The insect which produces galls, is the *Cynips quercus folii*, Linn. (*Diplolepsis gallæ tinctoriæ*, of Geoffroy,) a small hymenopterous fly, which punctures the tender shoot with its sting, and deposites its egg in the puncture. This is soon hatched, and then the maggot feeding on the juice of the plant, a morbid perversion is induced, which causes the excrescence, called gall-nut. The first picked galls, termed *Yerli* by the natives, are called black, green, or blue galls—these are gathered before the larvæ have become flies, and escaped: those subsequently gathered, when the flies have made their way out, and leave holes, are inferior and less astringent, and called white galls. The best galls are those of Aleppo, Smyrna, Magnesia, Amasieh, Diarbekir, and the interior of Natolia.

Sensible qualities. Inodorous, bitter, very astringent—the most intense of all vegetable astringents.

MEDICAL PROPERTIES AND USES. In the profluvia and hæmorrhages of a passive kind; in form of gargles and injections, an ointment for hæmorrhoids. Dose, internally, grs. x to ʒj, twice or thrice a day.

OFFIC. PREP. *Tinctura Gallarum.* E. D

Formulæ—

No. 1. ℞ Infus. Sabbatiæ angularis, f℥iss
Pulv. Gallarum, grs. x
Tinct. Catechu, f℥ss
Tincti. Cardamom. comp. f℥ss
Syrup. Cort. Aurantii, f℥j
Make a draught. Astringent.

No. 2. ℞ Gallarum pulverisat. ℥j ʒ
Adeps præparat. ℥j ʒ
Make an ointment, to be applied to the parts affected. In hæmorrhoids. *Cullen.*

Species 2—QUERCUS PEDUNCULATA. Common Oak, (in Europe.)

This species yields the officinal oak-bark, of the European Colleges—superseded in the United States, by

Species 3—QUERCUS ALBA. White Oak.

OFFICINAL. *Cortex.* The bark, Pharm. U. S.

Cabinet specimen, Jeff. Coll. *No. 575*—*figure* of the tree, *No. 576*,

Indigenous—powerfully astringent—chiefly used externally in decoction, as a lotion to indolent and fungous ulcers. Has been used in substance, and in decoction, and infusion, in intermittents.

Formula— ℞ Quercus albi cort. contus. ℥ss }
Aquæ ferventis, f℥xiij }
Macerate for an hour, and pour off. A convenient infusion.

No. 454.—QUERCUS TINCTORIA. Black Oak—Quercitron bark?

OFFICINAL. *Cortex.* The bark, Pharm. U. S.

Cabinet specimen, Jeff. Coll. No. 577—figure of the tree, No. 578.

Similar to the preceding—less astringent—used by dyers.

R.

No. 455.—RANUNCULUS BULBOSUS. Common butter-cup or Crowfoot.

Cabinet specimen, Jeff. Coll. No. 579—figure of the plant, No. 580.

Indigenous or naturalized, the root is rubifacient—applied long enough, blisters.

Species 2—RANUNCULUS SCELERATUS. Celery-leaved, or marsh Ranunculus.

Indigenous, very acrid—also rubifacient and epispastic.

Cabinet Specimen, Jeff. Coll. No. 581—figure of the plant, No. 582.

Both species would constitute a good subject for an inaugural dissertation.

No. 456.—Rhamnus catharticus. Purging Buckthorn.

Cabinet Specimen, Jeff. Coll. No. 583—figure of the plant No. 584.

Rhamnæ baccæ. Lond. *Rhamni cathartici succus.* Edin. *Rhamnus catharticus; Baccæ.* Dub. *Rhamnus catharticus: baccæ.* The berries of Buckthorn.

Cabinet Specimen, Jeff. Coll. No. 585—figure of the plant. No. 586.

Carthartic, very little used. Dose of the recent berries, ℈j. of the expressed juice f℥j, of the dried berries ℥j.

Officinal. *Syrupus Rhamni.* L. E. & U. S.

No. 457.—Rheum. The Rhubarb Plant.

Cl. 9. Ord. 3. *Enneandria Trigynia.* Nat. ord. *Holoraceæ,* Juss.

Two Species—

RHEUM UNDULATUM.

Cabinet specimen, Jeff. Coll. figure, No. 587.

RHEUM PALMATUM.

Cabinet specimen, Jeff. Coll. figure, No. 588.

These yield the well known Rhubarb, of which there are 3 varieties, known in commerce.

1. Russian rhubarb. Cab. Sp. Jeff. Coll. No. 589.
2. Turkey rhubarb. Cab. Sp. Jeff. Coll. No. 590.
3. East India or China rhubarb. Cab. Sp. Jeff. Coll. No. 591.

Rhubarb of American growth. Cab. Sp. Jeff. Coll. No, 592.

It is difficult to distinguish the different kinds, except by familiarity with them, and close examination. Dr. Paris says, that a number of persons in London, known in the trade by the name of *Russifiers*; gain a regular livelihood by the art of dressing this article; by boring, rasping, and then colouring the inferior kinds; for which they charge at the rate of 18 pence per pound. The Russian or Turkey has a peculiar, somewhat aromatic odour, a bitter subastringent taste, hardly sub-acrid, I think, as stated by Mr. A. T. Thompson; is gritty between the teeth, when masticated; tinges the saliva bright yellow. Breaks with a rough hackly fracture, easily pulverized; the powder being bright buff-yellow; when good, is compact and heavy. The East India or Chinese, has a stronger smell, and is more nauseous; breaks with a denser and smoother fracture; and by pulverization, is a reddish-yellow. Mr. A. T. Thompson's experiments, show that the varieties differ in several respects; they contain a large portion of extrac-

tive, a small portion of resin, mucus, tannin, gallic acid, a colouring matter, much oxalate of lime, and minute portions of alumen and silex. The Russian contains most oxalate of lime, more tannin and resin; the Chinese most extractive and gallic acid. The purgative principle appears to be *Rheumia*. According to the experiments of Mr. John Henderson, in the *Annals of Philosophy*, Rhubarb is supposed to contain a peculiar acid, which he calls Rheumic acid. M. De Lassaignes, believes he has proved that this is the oxalic acid, a point in which his analysis is confirmatory of that of Mr. A. T. Thompson. Mr. Brande, in an analysis of Rhubarb, published in *the 10th vol. of the Quarterly Journal of Science*, neither notices the oxalic acid, nor any oxalate, as items of his analysis; all other analyses had identified its existence. Rhubarb has been analyzed, besides by those chemists mentioned, by Scheele, Bayen, Deluval, Vauquelin, M. Clarion, M. Henry, all of whom notice the existence of the oxalate of lime in it.

Medical Properties and Uses. Rhubarb combines a happy union of astringency with a cathartic property—on which union, all the peculiar important effects depend, as a medicine: for this reason, I am not of opinion that the concentration of its purgative effects, in the sulphate mentioned below, is likely to prove any acquisition to the medical uses of rhubarb—it is however worth trial, for which reason I have inserted it.

Dose of rhubarb, grs. vi to x, as a tonic—as a cathartic, ℈j to ℥ss. Neutral salts quicken its operation, but I doubt whether they add to its virtue—rather, I think, modify its peculiar and valuable effects. Cases however occur, in which these and other combinations of the medicine are useful and proper

Offic. Prep. *Syrupus Rhei* and *Syrupus Rhei aromaticus*, U. S. *Infusum Rhei*, L. E. *Vinum Rhei palmati*, E. & U. S. *Tinctura Rhei*, L. E. D. & U. S. *Tinctura Rhei comp.* L. *Tinctura Rhei cum Gentian.* U. S. & E. *Tinctura Rhei cum Rhei*, E. & U. S. *Pil. Rhei comp.* E. & U. S. *Extractum Rhei*, (Cab. spec. Jeff Coll. No. 592*)—for this last, the following is proposed as the best method:—Take of coarsely powdered Chinese rhubarb, ℔ij digest in six pints of alcohol for seven days, and filter—distil off the alcohol, then evaporate to a proper consistence, in a water-bath saturated with muriate of soda. By this process, much less heat and time are required to evaporate the menstruum; and owing to the alcohol, much less oxygen is absorbed. and an extract of much more activity is thus obtained.

SULPHATE OF RHEUMIA.

Cabinet specimen, Jeff. Coll. No. 59[illegible]

Formula for the preparation of the sulphate of rhubarb.

"Boil for half an hour six pounds of coarsely powdered Chinese rhubarb, in six gallons of water, acidulated with two and a half fluid ounces of sulphuric acid; strain the decoction, and submit the residue to a second ebullition in a like quantity of acidulated water—strain as before, and submit it again to a third ebullition. Unite the three decoctions, and add by small portions, recently powdered, pure lime—constantly stirring it, to facilitate its action on the acid decoction. When the decoction has become slightly alkaline, it deposits a red flocculent precipitate, and the fluid is changed from a yellow to a crimson colour. the precipitate is then to be separated by passing it through a linen cloth and dried—after which, reduce it to powder, and digest in three gallons of alcohol, at thirty-six degrees, in a water-bath, for several hours, at a moderate heat. Separate this solution from the calcareous precipitate, and distil off three-fourths of the alcohol—there then remains a strong solution of *Rheumia*, to which add as much sulphuric acid, as will exactly neutralize it—evaporate this slowly to dryness, without having access to atmospheric air, the residuum will be of a brownish red colour, intermingled with brilliant specks, possessing a slightly pungent styptic taste, soluble in water, and its colour that of the native rhubarb. This preparation is a concentrated form of that valuable cathartic, separated from the ligneous and mucous portions, and bears a similar relation to the crude substance, that Quinine does to Peruvian Bark." *G. W. Carpenter.*

Formulæ—

No. 1. See Formula 2, of No. 185.

No. 2. See Formula of No. 443.

No. 3. ℞ Pulveris Ipecacuanhæ
Pulveris Rhei, āā ℈j }
Make a powder, emetic. *Stoerck.*

No. 4. ℞ Pulveris Rhei, ℥ss
Magnesiæ (ust.) grs x
Olei Anisi, gt. j }
For acidity in the primæ viæ. Modified by Duncan from Hartman, by substituting magnesia for crem. tart.

No. 5. ℞ Potassæ Carbonatis, ʒij
Pulveris Rhei, ʒj
——— Zingiberis, ʒj }
Make a powder—a tea-spoonful twice a day—a cathartic in gouty systems. I have found it eminently useful—it is a modification of the old *pulvis lenitivus.*

No. 6. ℞ Pulveris Rhei,
——— Jalapæ,
Hydrargyri sub-muriatis, āā gr. iij }
For young persons. *Hartman.* Excellent—I have used it often.

No. 7. ℞ Pulveris Rhei, grs. xxv }
Hydrargyri sub-muriatis, grs. v }
With simple syrup—to be given in the morning, for dysentery. *Pringle.*

No. 458.—Rhododendron Chrysanthum. Golden-flowered Rhododendron.

Officinal by the Edinburgh College.

Cabinet specimen, Jeff. Coll. No. 594.

No. 459.—Rhododendron Maximum. Great Mountain Laurel.

Cabinet specimen, Jeff. Coll. No. 595—figure of the tree, No. 596.

Indigenous. An excellent subject for inaugural dissertation. See Bigelow's Med. Bot.

No. 460.—Rhus.

Cl. 5. Ord. 2. *Pentandria Digynia.* Nat. ord. *Dumosæ*, Linn. *Terebintaceæ*, Juss.

Three species—

1. RHUS TOXICODENDRON. Poison Oak.

Cabinet specimen, Jeff. Coll. No. 597—figure of the tree, No. 598.

And Variety *β Radicans.* Poison vine.

Cabinet specimen, Jeff. Coll. No. 597*—figure of the vine, No. 598*.

2. RHUS VERNIX.

Cabinet specimen, Jeff. Coll. No. 599—figure of the tree, No. 600.

3. RHUS GLABRUM. Sumach.

Cabinet specimen, Jeff. Coll. No. 601—figure of the tree, No. 602.

The leaves of No. 1, officinal by the London and Edinburgh Colleges, and Phar. U. S. under name of *Toxicodendron.* The variety is identical in medicinal virtue. Species 3 is officinal in Phar. U. S.

All are indigenous. See Barton's Collections, Ives' ed. Paris, Bigelow's Med. Bot. Details in the Lectures.

Species 3d, a good subject for an inaugural dissertation—is far from being well understood, or properly analyzed

No. 461.—Ricinus Communis. Palma Christi.

Cl. 21. Ord. 8. *Monoecia Monadelphia.* Nat. ord. *Tricoccæ*, Linn. *Euphorbiæ*, Juss.

Cabinet specimens, Jeff. Coll. Nos. 603 and 604—figure of the plant, No. 605.

An annual plant, native of East and West Indies, and South America—now cultivated extensively, for the seeds, in New-Jersey, and other parts of the United States. The seeds yield the well-known Castor Oil, called

RICINI OLEUM, and OLEUM RICINI. It is cold expressed, and expressed by means of heat—the first is preferable, and now generally used. Dose, ℥j.

No. 462.—Rosa. The Rose Tree.

Cabinet specimen, Jeff. Coll. No. 606—figure of the tree, Nos. 607 and 608.

Several species yield the officinal petals, and distilled water, called Rose-Water, which is astringent.

No. 463.—Rosmarinus officinalis. Common Rosemary.

Cabinet specimens, Jeff. Coll. Nos. 609 and 610—figure of the plant, No. 611.

Yields the Oil of Rosemary. The tops and leaves are used as an emmenagogue—is a plant of the poets, and, by association with their song, its very name is soothing.

No. 464.—Rubus.

Species 1—VILLOSUS, and other species, called Blackberry.

Cabinet specimens, Jeff. Coll. Nos. 612 and 613—figure of the shrub, No. 614.

Species 2—RUBUS TRIVIALIS, *Synonym—R. Procumbens,* } Called Dewberry.

Cabinet specimens, Jeff. Coll. No. 615 and 616—figure of the shrub, No. 617.

Cortex Radicis, the bark of the root of both, officinal in Phar. U. S.

For a detailed account, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. II.

No. 465.—Rubia Tinctorum. Madder—Dyer's Madder.

Cabinet specimen, Jeff. Coll. No. 618—figure of the plant, No. 619.

The root officinal, by L. E. D. & U. S.

Bitter; used as an emmenagogue; when long used, its colouring matter tinges the bones. Dose, grs. xv to ℈j, three or four times a day. I cannot believe it is emmenagogue, but by its tonic property.

No. 466.—Rumex. Dock.

Species 1—RUMEX BRITANICA, } The Water Dock.
Synonym—Rumex Aquaticus, }

Root officinal, by Dub. and U. S.

Cabinet specimen, Jeff. Coll. No. 620—figure of the plant, No. 621.

Powerfully astringent.

Species 2—RUMEX OBTUSIFOLIUS. Blunt-leaved Dock.

Cabinet specimen, Jeff. Coll. No. 621*.

Officinal, in Phar. U. S. Similar in virtues.

Species 3—RUMEX ACETOSA. Common Sorrel. (Called Sheep's Sorrel.)

Cabinet specimen, Jeff. Coll. No. 622—figure of the plant, No. 623.

The leaves officinal, by the Lond. and Edin. Colleges.

Acid, austere; contain super-oxalate of potass—considered antiscorbutic.

No. 467.—Ruta Graveolens. Common Rue.

Cabinet specimens, Jeff. Coll. Nos. 624 and 625—figure of the plant, No. 626.

An ancient medicine, to this day officinal, by L. E. and D. Yields an essential oil, and an extract, both officinal, as above, but left out of Phar. U. S. Only used now in domestic practice. A plant of the poet's song, and, with rosemary, have afforded some melancholy touches, in the strains which embrace them: Shakspeare's Ophelia affords an example.

S.

No. 468.—Sabinæ folia. Savin leaves. See No. 335.

Dr. Chapman claims the original use of Savin in rheumatism. It had long been used in gout; and Dr. Rave, who wrote on Savin, in 1794, speaks in the highest terms of its use in chronic rheumatism; yet Dr. Chapman says: "Baffled in my attempts to cure some of the forms of chronic rheumatism with the ordinary remedies, I was early led, in consequence of my speculative notions as to the powers

of this medicine, to try it in this disease."* What a vain effort to claim original practice! How trifling, and how useless! As in the case of the Flowers of Zinc,† the practice was known thirty-three years ago!!!

No. 469.—Saccharum officinale. Sugar-cane.

Cabinet specimen, Jeff. Coll. No. 627—figure of the plant, No. 628.

Native of Africa and Lower Asia, as well as the East Indies and Arabia Felix: said to grow spontaneously in America—hardly true. Is cultivated in the West Indies and Louisiana, &c. *Asclepias Syriaca*, *Zea Mays*, yield it, and at Kamtschatka, *Heracleum spondylium*, and *Fucus saccharatus*, yield it.

Margraff obtained from ℔j root of white beet, ½ oz. pure sugar—from same quantity skerret, 1½ oz. pure sugar—from same quantity red beet, 1¼ oz. sugar, equally pure. Carrot yields a sweet juice, but resembling honey rather than sugar, equally pure. Parsnip yields a small quantity, and so does American Aloe. The juice obtained from the Birch tree by incision in water, yields a sort of manna. Lastly, grapes, moistened and a little pressed, give out a syrup containing a little sugar. *Tabaxir* is sugar of bamboo. Urine of diabetic patients yields sugar.

Sugar, as an article of diet, is well known; is a neutral saline substance, the acid of which Bergman first taught us to separate by means of the nitrous acid; and it appears that several other substances, both vegetable and animal, contain an acid similar to that of sugar. The other constituent parts of sugar seem to be an oily and a mucilaginous matter, and though it is not satisfactorily explained how a combination of these substances should produce on the organs of taste a sensation of sweetness, yet as it is known that the strong vitriolic acid becomes sweet by uniting it with alcohol, we may easily conceive that the sweetness of sugar is effected in a somewhat similar way.

From the known properties of sugar, it has been supposed to unite the unctuous part of the food with the animal juices; and hence it has been thought to increase fatness or corpulency: others, however, have thought that a contrary effect would be produced by this quality of sugar—viz. by preventing the separation of the oily matter from the blood, which forms fat. Professor Murray, who has treated this subject very elaborately, thinks, that by the fermentation which sugar undergoes in the stomach, and by its relaxing resolvent saponaceous qualities, as well as

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* Therapeutics. † See Dr. Chapman's claim on this point, under *Zincum*.

by the acid which it contains, it rather tends to emaciate than to fatten the body; and in this opinion, he observes, that he has the authority of Boerhaave, who says, if this sweet be taken in large quantities, it produces emaciation by dissolving too much of the animal oil. He is therefore much surprised that Mr. John Hunter should recommend sugar and honey as the best restorative to those suffering from great debility, by a long course of mercury. It is certainly, however, nutritious in such cases, in its crude state, whatever it may do in its refined state. Those animals which wholly feed upon it in the sugar islands, become remarkably corpulent; and negro children, whose diet happens for a season to be confined to molasses, are easily distinguished from others by their superior bulk—they are however said to be more disposed to suffer by worms, and are probably less active and healthy.

Sugar, however, appears, by the experiments of several writers, to prove deleterious to several kinds of worms, either by immersing them in a solution of sugar, or sprinkling it upon their bodies; and 20 grains of lump sugar, forced into the stomach of a frog, produced immediate torpor, and death, which followed in the course of an hour: it also has proved fatal to pigeons, and to the gallinæ kind, but not to sparrows; and with sheep and dogs, it had no other effect than that of a cathartic. *Reed.*

Sugar may certainly be taken into the human stomach, in pretty large quantities, without producing any bad consequences, though proofs are not wanting of its mischievous effects, in which, by its attenuating and dissolving the fluids, and relaxing the solids, debility and disease have been said to be produced. Stark, for many days, took 4 ounces of sugar, to 8, 10, 16, and even 20, with bread and water; by which nausea, but no other inconvenience, ensued.

No. 470.—Sago. A restorative dietetic. See No. 213.

No. 471.—Sagapenum. The gum-resin.

Cabinet specimen, Jeff. Coll. No. 629.

Officinal by the European Colleges. Is the product of an unknown Persian plant; is one of the alliaceous fetid gums, and, like them, antispasmodic. Dose, grs. x to ʒss.

No. 472.—Salix. Willow.

Cl. 22. Ord. 2. *Dioecia Diandria.* Nat. ord. *Amentaceæ.*

Species 1—SALIX FRAGILIS. Crack Willow.

Cabinet specimen, Jeff. Coll. No. 630—figure of the tree, No. 631.

The bark officinal by Dub. College—must be dried in an oven—a bitter.tonic.

Species 2.—SALIX ALBA. White Willow.

Cabinet specimen, Jeff. Coll. No. 632—figure of the tree, No. 633.

The bark officinal, as above—very astringent and bitter—of course, tonic.

Species 3—SALIX ERIOCEPHALA, and some other indigenous species.

Cabinet specimen, Jeff. Coll. No. 634—figure of the tree, No. 635.

Officinal in the Phar. U. S. Similar in virtues to the others. The whole genus is too much neglected: candidates would find plenty to do in examining them.

No. 473.—Salep. Salop. See No. 408.

This fine farinaceous powder (mucilage) is prepared from the roots of a gynandrous plant, and is usually brought into commerce from Turkey. Hence it is supposed to be made from the *Orchis Morio*. But from Mr. Meath's account, in the 59th vol. of Philosophical Transactions, it may be formed from several other species of Orchis. Cullen says he has seen it prepared in Britain, from the Orchis bi-folio, as pure and perfect as that which comes from Turkey. It is an insipid substance, of which a small quantity, by proper management, converts a large portion of water into mucilage.

No. 474.—Salsola.

Several species of sea-side plants, of which this is the generic name, yield soda by incineration.

Cabinet specimens, Jeff. Coll. Nos. 636, 637, 638, 639, 640; the last one indigenous.

No. 475.—Salvia officinalis. Common Sage.

Cabinet specimen, Jeff. Coll. No. 641.

Officinal, in the European Colleges; used in gargles—is astringent and aromatic.

No. 476.—Sambucus. Elder.

Species 1—SAMBUCUS NIGRA. European Elder.

Cabinet specimen, Jeff. Coll. No. 642.

Species 2—SAMBUCUS CANADENSIS. Common indigenous Elder.

Cabinet specimens, Jeff. Coll. Nos. 643 and 644—figure, No. 645.

The berries, Officinal in Pharm. U. S. The pith, and flowers, are also used; ointments are made of both species, and a rob of the 2d.

No. 477.—Sanguinaria Canadensis. Blood-root Paccoon.

Cabinet specimens, Jeff. Coll. Nos. 646 and 647—figure, No. 648.

The root officinal in Phar. U. S. and in Ives's ed. of Paris's Pharm. An important native medicine. For a detailed account, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. I.

Dr. Dana obtained an alkaline vegetable principle from Sanguinaria, for an account of which, see No. 7, Medical and Physical Journal of 1827.

No. 478.—Sapo Durus. The Hard or Spanish Soap, of the Colleges—used in Pharmacy and in Surgery.

No. 479.—Sarcocoll.

Usually in oblong, semi-transparent, yellow globules, which have a bitter-sweet taste, and an odour resembling anise-seed. Does not crystallize—soluble in water and alcohol. Treated with nitric acid, yields oxalic acid.

Variety τ— Liquorice) dissolves in nitric acid, and yields tannin. Treated with sulphuric acid, yields about $\frac{1}{4}$ its weight of charcoal. Is not susceptible of fermentation.

No. 480.—Sarsaparillæ radix. See No. 496.

No. 481.—Sassafras. The bark of root and tree—the pith of the young shoots, and the flowers, used in medicine, see No. 349.

No. 482.—Scammonia. The gum-resin. See No. 185.

No. 483.—Scilla maritima. Squill.

Cl. 6. Ord. 1. *Hexandria Monogynia.* Nat. ord. *Coronariæ*, Linn. *Asphodeli*, Juss.

Cabinet specimens, Jeff. Coll. No. 649 and 650—figure, No. 651.

The root officinal. L. E. D. & U. S.

A native of Spain, Sicily, Syria, and Barbary. Two varieties,

the white bulb and the red bulb—as shown in the cabinet specimens.

Qualities. Inodorous, bitter, nauseous, acrid. The expressed juice slightly reddens litmus paper. The acrimony on which the medicinal virtues depend, is partially dissipated by drying and long keeping; and is completely destroyed by heat of 212° F.; it is extracted by alcohol, water, and vinegar. Vogel found it, on analysis, to contain—bitter principle (*scillia*) 35, Tannin 24, Citrate of lime 5, Saccharine matter 6, Woody fibre 30; making one hundred parts of the dried bulb.

Medical Properties and Uses. In small doses diuretic, and it is supposed expectorant; in larger doses, emetic, purgative—is very stimulating. Used in dropsies, whooping cough, protracted catarrh, &c. &c. Dose, of dried bulb gr. i, in pill, night and morning, or every 6 hours—gradually increasing to grs. vi or upwards; till nausea is induced, and it promotes diuresis, and acts by relieving the chest.

Offic. Prep. *Acetum Scillæ.* L. E. D. *Oxymel Scillæ.* L. D. *Pilulæ Scillæ comp.* L. E. D. *Pulvis Scillæ.* E. D. *Syrupus Scillæ maritimæ.* E. *Tinctura Scillæ.* L. D. *Mel Scillæ compositus.* U. S. An excellent preparation, when well prepared; for which, Dr. Coxe, its *formulist*, deserves great credit. It is often carelessly made, and is then dangerous; also often uncertain in its operation. I have attended at least two cases, in the first families of this city, where death had like to have occurred from its *domestic* use—the mothers being unacquainted with the fact, that it contained tartar emetic, which I think should be printed on the labels.

Formulæ—

No. 1. ℞ Pulv. Digitalis fol.
—— Scillæ exsiccat. āā gr. i
Hydrargyri sub-muriatis, gr. ss—gr. i
Potassæ super-tartratis, ℈j to ʒss
Syrupi Zingiberis, q. s.

To form a bolus, one night and morning—*Maclean*
Diuretic.

No. 2. ℞ Pulv. Digitalis fol.
—— Scillæ exsiccat. āā grs. iv
Hydrargyri sub-muriatis, grs. vi
Pulv. Myrrhæ, ℈ij
Rubbed together, then add—
Extracti gentianæ, q. s.

Make 24 pills—2 or 3 to be taken night and morning, washed down by a cupful of the following.

℞ Potassæ super-tartratis, ℥ij
Aquæ ferventis, ℔j
Add—
Rad. Zingiberis contrit. ʒss
Sacchari purificati, ʒj
Spir. Juniperi communis, ʒjss
Sive,
Vini Rhei, ʒiij

In the cure of Hydrothorax.—*Maclean.*

No. 3. See Formula 2, No. 393.

No. 4. See Formula 2, No. 330.

No. 5. ℞ Oxymel Scillæ,
Syrupi Althææ,
Mucilaginis Acaciæ, āā f℥ss

Make an electuary—of which a little may be often taken.

No. 6. ℞ Tincturæ scillæ, ♏ x
Acidi nitrici dilut. ♏ vi
Extracti hyoscyami, gr. iii
Aquæ puræ, f℥jss

Make a draught, to be taken every 3d hour, for promoting expectoration.—*Bree.*

No. 7. See Formulæ 2, No. 441.

No. 8. ℞ Scillæ Rad. exsiccat. grs. ii
Pilulæ Hydrargyri, grs. v
Opii, gr. ss

Make a pill, to be taken 4 nights successively, going to bed. Diuretic.

No. 9. See Formula 2, No. 439.
No. 10. See Formula of No. 445.
No. 11. See Formula 3, No. 441.
No. 12. See Formula 1, No. 330.

No. 484.—Scillia. Scilline.

Cabinet specimen Jeff. Coll. No. 652.

The proximate bitter principle of the preceding. White, transparent; breaks with a resinous fracture; pulverulent; attracts moisture rapidly from the air, until it becomes fluid; intensely bitter taste, with a slight degree of sweetness; very soluble in water and alcohol.

No. 485.—Scrophularia nodosa. Figwort herb.

Cabinet specimen, Jeff. Coll. figure, No. 653.

The herb officinal by Dublin College. Diuretic, sedative. Our indigenous species deserve an inaugural dissertation: we have several.

No. 486.—Secale cereale. The Rye.

Nat. fam. *Cerealiæ.*

Contains sugar, as is proved by the quantity of whiskey procured from it. It yields ⅓ of its weight in mucilage; is therefore very nourishing. **Does not show any milkiness** in water, triturated with it; hence Dr. Cullen says, its oil is under peculiar combination. **Is** more readily accescent than all other cerealia, therefore, it is likely, there is not a due proportion of oil. It is decidedly laxative as bread; rye mush or hasty-pudding is a good laxative, and is nourishing. *Secale cornutum*, or Ergot, is produced from it.

SECALE CORNUTUM. Ergot—Spurred Rye.

Cabinet specimens, Jeff. Coll. Nos. 654, 655, 656.

A parasitic fungus, infesting the glumes of some of the *cerealia*, particularly the preceding; slate-coloured externally, yellow-white within; variable in size and form, but frequently resembling the cock's spur, whence one of its names. Taste at first, not decided; subsequently, disagreeable, nauseating, and sub-acrid. Yields its active properties to water and alcohol.

Medical Properties and Uses. Long known as an active substance; but first proposed by Dr. Stearns, as a remedy to overcome the difficulties of perverse parturition. It has been violently opposed, and as strenuously recommended; has been accused of killing the child. I have, I confess, great *prejudices* against the use of ergot in parturition, though I believe there are cases, which may be properly treated by it; I however have little reluctance to yield my opinion on this subject, to that of our two eminent, skilful, and experienced accoucheurs, Dr. James, and Dr. Dewees; they are both of opinion that it may be administered without hazard, where the parts are sufficiently dilated, and where there is no natural impediment from mechanical causes. I believe that none but an experienced accoucheur should venture to use it. Further details in the Lectures. Dose, grs. x to ℈j.

No. 487.—Senegæ Radix. Senega snake-root. See No. 435.

No. 488.—Senegæ Oleum. Senega Oil.

Cabinet specimen, Jeff. Coll. No. 657.

A bituminous natural production, collected from the Seneca Lake—used externally, as a stimulant embrocation for rheumatism

No. 489.—Senna. Called East India, and Alexandrian Senna.

Consists of three plants, viz:—

1. CASSIA SENNA.

Cabinet specimens, Jeff. Coll. Nos. 658 and 659—figure, No. 660.

2. CASSIA LANCEOLATA.

Cabinet specimens, Jeff. Coll. Nos. 661 and 662—figure, No. 663.

3. CYNANCHUM OLEÆFOLIUM, called Arguel.

Cabinet specimens, Jeff. Coll. No. 664 and 665—figure, No. 666.

For detailed account, see W. P. C. Barton's Veg. Mat. Med. U. S. *under chapter on* Cassia Marilandica.

Qualities. Of a faint and sickly odour; consists of extractive, resin, mucilage, a saline matter, and a purgative bitter principle, which MM. Lassaigne and Fenuelle, have obtained in an isolated state, and have called it *Cathartine—Sennia would be a term more corresponding with the* proximate active principles of other vegetables. Water and spirit extract the virtues of senna, the infusion in the first, being brownish, in the latter a fine green colour.

Medical Properties and Uses. A well known searching and efficient cathartic; used in infusion, rarely in powder; in the latter way, however, it may be advantageously given to children, by mixing in a mortar, ℥j of the finely pulverized leaves, with a pound of figs, so intimately that the taste of senna is merged in the saccharine and mucilaginous matter of the fruit. This preparation will keep in winter for a couple of months. A piece the size of a nutmeg, will purge a child actively, and will never be refused by them, being as agreeable as the fig itself. I have used it for many years past, with great advantage.

Offic. Prep. *Infusum Sennæ.* L. D. & U. S. *Confectio Sennæ.* L. E. D. & U. S. *Extract Cassiæ Sennæ.* E. *Infusum Tamarind. cum Senna.* E. D. & U. S. *Pulv Sennæ comp.* L. *Tinct. Sennæ.* L. D. *Tinct. Sennæ comp.* E. & U. S. *Syrupus Sennæ.* L. D. *Infusum Sennæ comp.* U. S. *Tinct. Sennæ aromat.* U. S.

Formulæ—

No. 1. ℞ Confectionis Sennæ, ℥ij
Ferri Tartarizat. ʒj

Make an electuary—a piece the size of a nutmeg. the dose. Cathartic.

No. 2. ℞ Foliorum Sennæ, ℥iij
Sodæ Sulphatis, ℥j
Aquæ fervent. ℔j

Infuse, and decant, for an enema.

No. 3. ℞ Confectionis Sennæ, ℥iss
Sulphuris Præcipitat. ʒss
Syrupi Ros. q. s.

Make an electuary, of which a portion, the size of a nutmeg, may be taken 3 or 4 times a day, until the bowels are sufficiently open. In hæmorrhoids.

No. 4. ℞ Infusi Sennæ, f℥ij
Sodæ Tartarizatis, ʒvi
Aquæ Cinnamomi, f℥ss

Make a solution, to be taken in two or three doses. Cathartic.

No. 5. ℞ Infusi Sennæ, f℥j
Tinct. Sennæ, et
Tinct. Jalapæ, āā f℥j
Potassæ Tart. ʒj
Syrupi Sennæ, f℥j

Make a draught, to be taken early in the morning Cathartic.

No. 490.—Sennia. (*Cathartine.*) Sennine.

Cabinet specimen, Jeff. Coll. No. 667.

I propose this name, in lieu of *Cathartine.*

The purgative bitter principle of the preceding, uncrystallizable, reddish-yellow, peculiar smell, nauseous bitter taste; soluble in water and alcohol, in all proportions. According to Bouillon Lagrange, the residue of the watery infusion, evaporated to dryness, and burnt, yields potass, sulphate of potass, carbonate of lime, magnesia, and silica. Dr. Paris asserts, that Sennia is *se ipse* inert. The subject affords an excellent opportunity for the experiments of some candidate for a degree, and much remains to be done with it.

No. 491.—Serpentariæ Radix. The root of Virginia Snake-root, commonly called Serpentaria. See No. 75.

No. 492.—Sevum. Suet. See No. 409.

No. 493.—Simarouba. The bark of a species of Quassia. See No. 452.

No. 494.—Sinapis alba. Mustard.

Cabinet specimen, Jeff. Coll. No. 668, called black, and No. 669, called white—figure, No. 670.

A tetradynamous cruciform plant, yielding the common well-known condiment, chiefly useful in medicine as a cataplasm. See Vol. I. of these Outlines, p. 194.

Officinal. *Cataplasma.* L. D. *Emplastrum Meloes comp.* E.

Formula— ℞ Farinæ Sinapis,
Pulv. Salviæ officinalis,
Pulv. Zingiberis, āā ℥ss

Make a powder, of which, 3 tea-spoonfuls are to be given every morning before breakfast. In Epilepsy and Chorea.—*Otto.*

After being some days administered, Dr. Otto directs, that it be intermitted for a day or two. Dr. Hewson observes, (MS.) "The advantage of this practice is questionable. In the above doses, the medicine sometimes proves emetic. To prove efficacious, the remedy must be continued for some weeks, and even months."

No. 495.—Sium latifolium.

An umbelliferous, aquatic poisonous plant. See Orfila's Toxicology.

We have several indigenous species, which are worth investigation—they are chiefly sub-aquatic plants. This notice for candidates.

SIUM NODIFLORUM. Procumbent water-parsnip—is officinal, (the herb,) by the Dublin College.

No. 496.—Smilax.

Cl. 22. Ord. 6. *Diœcia Hexandria.* Nat. ord. *Sarmentaceæ,* Linn. *Asparagi,* Juss.

Species 1—SMILAX SARSAPARILLA. Sarsaparilla.

Cabinet specimen, Jeff. Coll. No. 671, and No. 672 is the American *Smilax Sarsaparilla,* (from Jersey)—figure of the plant, No. 673.

Officinal. *Radix Sarsaparillæ,* of the Colleges.

Native of South America, the West Indies—and indigenous. That of commerce, is chiefly imported from the Spanish West Indies. Humboldt states, that nearly 5000 quintals are annually exported from Vera Cruz.

Qualities. Inodorous, slight mucilaginous bitter taste—imparts its virtues to alcohol and boiling water. The watery infusion has a brown colour, and reddens litmus paper.

"What is commonly called by the English, in India, *Country Sarsaparilla*, is not the root of the *Smilax Sarsaparilla*, which is, however, occasionally brought to the Coromandel Coast, from America—but that of *Periploca Indica*, (a pentandrous plant,) a common Indian plant, described by Burman, as having narrow, acute, glabrous leaves. The two roots resemble each other very much in appearance and qualities; both being inodorous, mucilaginous, and, in a slight degree, bitter. The *Smilax Perfoliata*, (Linn.) is a native of Cochin-China, where it is called *ti-giai*, and is supposed to have similar virtues to sarsaparilla. The *Periploca Indica* is recommended by the Tamool Doctors, in cases of gravel and strangury, given in powder, mixed with cow's milk; they also give it in decoction, in conjunction with cummin-seeds, to purify the blood, and correct the acrimony of the bile." The *Periploca Indica*, "has a twining, round, ash-coloured stem; a pair of leaves from each joint, almost sessile, bright-green above, and pale underneath, with many flowers, which sit close." *Ainslie's Mat. Indica.*

TAMUS SYPHILITICA is another root, much used for Sarsaparilla.

MEDICAL PROPERTIES AND USES. Very well known to be useful, and highly so in the treatment of syphilis, and all its consecutive affections; and greatly useful as an adjunct to mercury. Yet I do not know, I confess, what to call it; whether diaphoretic, diuretic, or what; to call it Sarsaparilla, seems to be all one can do—and it is to me a puzzle, to know by what property it is efficacious; and yet I know, by twenty year's practice, it is so. Dose, in substance, which is a stupid way of giving it, ℈j to ʒj—should always be administered in the officinal formulas, which are:—

Decoctum Sarsaparillæ. L. E. D. & U. S. *Decoctum Sarsaparillæ comp.* D. & U. S. *Extractum Sarsaparillæ.* L. This latter is an absurd preparation; I should as soon expect to extract mental fire from a fool, as sanativeness from Sarsaparilla.

Species 2—**SMILAX CHINA.** China Root. (*Tsinau.*)

Cabinet specimen, Jeff. Coll. No. 674—(These are rare roots in commerce now.)

Tamus Pseudo-China, or Bastard China root—root large—called also, Bastard Ipecacuanha and Wild Yam, is substituted and sold for it. Roots yield a reddish sago. Root large, tuberous, knotty; dark reddish-brown colour outside, reddish-white within. The native Indians, like the Japanese, suppose it efficacious in old venereal cases; and in cases where the limbs are stiffened. It grows abundantly in the province of Onansi, China; it is cultivated in Upper

India. According to the Abbe Rochm, in his voyage to Madagascar, the Chinese often eat this substance instead of rice; and he says, that it contributes to make them lusty. Lately, much neglected by European practitioners; according to Aitkin, it contains about one-half the weight of the root, in bland nutritive matter. According to Dr. Flemming's experience in Bengal, either as an auxiliary to mercury, or for improving the general health, after its use, it is equal to Sarsaparilla. 2 drachms, given twice daily, in decoction of the same root, in cases requiring antiscorbutics and diaphoretics. The *Smilax pseudo China*, called by the Hindoos, *Muhaisa;* and by the Chinese, *Cum-Kŏng-Cunn;* is used by the latter, in place of the true China root. There are 10 other species medicinal, but not much known or used. Brown, in his History of Jamaica, says, it grows in the cool inland parts of the island, having a crooked root, thick as the arm, and climbing to the top of the tallest trees—esteemed much there, and said not to be inferior to that of East India. It yields a gum in Jamaica, called *Iziliti*, which the natives chew, to fasten the teeth.

No. 497.—Sodæ murias. Common Salt.

Much commended, in checking hæmoptisis and for worms, by Rush—he recommended a table-spoonful, to be dissolved in the mouth during an attack of bleeding, in the first affection—and for the other,

Formula ℞ Sodæ Muriatis, ℥ij }
Coccinellæ, ʒij }

Make a powder—half a dr. the dose.—*Rush.*

No. 498.—Sodæ sub-boras. L. D. & U. S. *Boras Sodæ.* E. Borax—or Sub-borate of Soda.

Cabinet specimen, Jeff. Coll. No. 675.

Used only externally, in powder mixed with equal parts of loaf sugar; or by making a linctus with 8 or 10 parts of honey; for aphthæ, very efficacious.

Offic. Prep. *Mel Boracis*, L.

No. 499.—Sodæ sub-carbonas. L. E. D. & U. S. Sub-carbonate of Soda.

Cabinet specimen, Jeff. Coll. No. 676.

In octohedral prisms, truncated at the summits of the pyramids; effloresces in the air; at 150° F. undergoes watery fusion, its crystals containing about 7 proportions of aqueous fluid—taste mild, alkalescent; consists of soda 29.5, carb. acid 20.7; soluble in 2 parts water, at 60° F.; insolu-

ble in alcohol. Dose, grs. x to ʒj, twice a day, or oftener, *pro re nata*. Antacid, Diuretic, Antilithic.

Formulæ—

No. 1. ℞ Sodæ Sub-carbonatis, grs. x
Infus. Quassiæ, fʒj
Tinct. Calumbæ, fʒj
Make a draught, to be taken twice a day. Antilithic.

No. 2. ℞ Sodæ sub-carbonatis, gr. x
Misturæ Amygdal. fʒj
Bal. Copaibæ, (ope mucilag. mist.) fʒss
Tinct Opii, ♏v
Make a draught, to be taken when in pain. Antilithic.

No. 500.—Sodæ Sulphas. L. E. D. & U. S. (*Natron Vitriolatum.* P. L. 1787—*Sal Catharticus Glauberi.* P. L. 1745.)—Sulphate of Soda, (called Glauber Salt.)

Qualities. Appearance well known; very efflorescent, in which state it is twice as strong as before; consits of sulphuric acid 24.64, soda 19.36, water 56; water fʒj at 60° F. dissolves ʒiijss; more soluble in boiling water—insoluble in alcohol. Dose, ʒj, or less; a well-known common nauseous but efficacious purgative.

See Formulæ 1, 2, of No. 367.

No. 501.—Solanum Dulcamara. (1st species.) Woody Nightshade—or Bitter Sweet.

Cabinet specimen, Jeff. Coll. No. 677—figure, No. 678.

A pentandrous plant, indigenous; the stipites, or small twigs, are officinal—bitter narcotic; contain solana—used in cutaneous diseases.

No. 502.—Solanum nigrum. Black Nightshade.

Cabinet specimen, Jeff. Coll. No. 679—figure, No. 680.

The leaves and berries. Narcotic—contain solana.

No. 503.—Solana. Solanine.

The alkaline proximate principle of the two preceding Nos. discovered by M. Destosses, of Besançon; it exists in the leaves of No. 501, but not in those of No. 502; found most abundantly in the berries of No. 502.

Qualities. Perfectly pure, is in a white, opaque, sometimes pearly powder—inodorous, nauseous, slightly bitter, the latter property more developed by its union with the acids, particularly the acetic. Its salts incrystallizable, the solutions giving by evaporation, a gummy transparent mass, easily pulverized; insoluble in cold water—hot water dissolves only one eight-thousandth part; alcohol dissolves a small portion; affects substances stained by turmeric; restores the blue of turnsole paper rubified by acids; unites with acids in the cold, and yields perfectly neutral salts with care; saturated by a small quantity of acid.

Medical Properties and Uses. Vomits, and induces sleep: less narcotic than opium: has not been employed in medicine; is therefore a good subject for experiment and a dissertation.

No. 504.—Solidago Odora. Anise-scented Golden-rod.

Cabinet specimen, Jeff. Coll. No. 681.

Is officinal in Pharm. U. S. The leaves should be investigated by some candidate. The Solidago Virgaurea of Europe, is officinal by the Dublin College.

No. 505.—Spartium Scoparium. Common Spanish-Broom.

Cabinet specimen, Jeff. Coll. No. 682—figure, No. 683.

Officinal by L. E. D.—Not used in the U. S.

No. 506.—Spiræa Tomentosa. Hardhach.

Cabinet specimen, Jeff. Coll. No. 684.

The root is officinal by the Pharm. U. S.—should be selected as the subject of some candidate's thesis.

No. 507.—Spigelia Marilandica. Carolina Pink.

Cabinet specimen, Jeff. Coll. No. 685—figure, No. 686.

The root officinal by L. E. D. & U. S. For a detailed account, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. II.

No. 508.—Spongia officinalis. Sponge.

Used in surgery by pharmaceutical preparation; and when burnt, has been used in scrofulous tumours, and goitre.

See No. 275.

Formula— ℞ Spongiæ Officinalis ustæ, grs. x
Pulveris Rhei, grs. iv } Mix.

To be given night and morning, with a draught of whey after it. In scrophulous cases.—*Hulse.*

No. 509.—STALIGMITIS GAMBOGIOIDES. (Willd.) Gambogia—-Cambogia—Gamboge—-The Gum-resin of the leaves, branches, and trunk.

Synonyms—*Garcinia.* (Gaertner.) *Gumma Gutta,* (Linn.)

Cl. *Polygamia.* Ord. *Monœcia.* Nat. ord. *Tricoccæ.*

Cabinet specimen, Jeff. Coll. No. 687—figure, No. 688.

A tall tree, the trunk 6 to 12 feet in circumference, moderately branching. The wood is white; the external bark is blackish, red beneath this, and yellowish-white interiorly.

Fruit a smooth, globular-whitish, or rosaceous berry, crowned by the lobes and style, containing long triangular seeds, several in number. This tree is a native of the kingdom of Siam, and of Ceylon, where it is known by the names *Ghokata, Gokkata,* or *Gokkatha.* The best kind is called *Ceylon Gamboge*; an inferior kind is obtained in those countries from the *Coreapulli* of Rheede, which is the *Gambagia gutta* of Linnæus. The Siamese Gamboge, is yielded by the *Garcinia morella*—and is in tears. The Mexican Gamboge, or Gambooge, is yielded by the *Vismia Guttifera,* and *Vismia Nossibfera* The drops or tears of Siam Gamboge, are obtained by breaking the leaves and young shoots. In Ceylon, the bark of the *Stalagmitis Gambogioides,* is wounded by a sharp stone, and the leaves and young branches cut, to obtain it. It is first collected in cocoa nut shells, thence transferred into earthen jars, where it remains until nearly dried into a cake, when it is formed into rolls, and wrapped up in leaves. Brought into Europe and this country, first by the Dutch; always in cases or boxes.

Besides the *Gambogia Gutta* of Linnæus, several species of *Hypericum, Chelidonium laciniatum,* and several other plants, yield a yellow juice, which concretes in tears and drops; but the tree which affords the true Gamboge, is the *Stalagmitis,* as was clearly established by Koenig, who resided many years at Tranquebar. There are other plants, doubtless, of the family of *Guttiferæ,* which yield a similar concrete. I have little doubt that several species of Chelidonium, the *Sanguinaria Canadensis,* &c. would yield a similar substance.

QUALITIES. Gamboge is inodorous, solid, heavy, opaque, friable, breaking with a vitreous fracture, of a deep brownish-yellow colour externally, or when exposed to the air; and a bright-yellow within, on its recent fracture, which gradually assumes a deeper orange-red hue, on exposure, and becoming a brilliant light-yellow dye on the addition

of water: the powder is likewise golden-yellow. It is not insipid, as stated by Thompson, and others, but is rather of a nauseous, acrid, and slight bitter taste. This taste, however, is not observed, until retained a short time in the mouth, or on the tongue and lips—continued longer, it is very acrid. It sticks to the teeth, when chewed, and stains the saliva yellow. Specific gravity, 1.221, according to Brison. When heated, it burns with a white flame, if the heat be intense enough; moderate heat melts it. Ignition of it, leaves a light spongy charcoal. Neither water, nor proof spirit, dissolve the whole of gamboge; the latter, 9 parts in 10; and water, not more or less; but it communicates to both a deep yellow hue; sulphuric ether dissolves 6 parts of 10, and is similarly coloured. Potass, with the solutions of water and alcohol, cause a complete solution, and deepen the colour; water does not render this complete solution turbid, but acids precipitate from them a beautiful yellow substance, soluble in excess of acid. Gamboge is soluble in pure solutions of pure ammonia and potass, forming deep orange-red tinctures. The watery solution of Gamboge, reddens tincture of litmus—is not precipitated by alcohol, but rendered transparent by it. Oxy-sulphate of iron, strikes with it a pale olive-brown, but is not precipitated. Nor is it affected by solutions of any other of the metallic salts. Gamboge, according to Braconnot, contains 1 part of gum, resembling cherry-gum; 4 of brittle resin.

Medical Properties and Uses. Is a powerful drastic cathartic, and often vomits powerfully. First introduced into the Materia Medica, by Clusius, in 1603. Many assert that it is a useful purgative, and may be safely administered. Others declare that it produces vomiting, flatulency, gripes, tormina, hypercatharsis; and regard it as a dangerous drastic purge, which should be confined to veterinary practice. Daubenton observed, that in doses of 3 drachms, it killed sheep. Orfila, gave it in large doses to dogs; it vomited, given at intervals, and produced inflammation of the stomach and intestines; applied to their wounds, it neither vomited nor purged, but produced death in 24 hours; apparently, by sympathetic involvement of the nervous system, in both instances, or by acting like burns without an eschar, when put on wounds. Produces in man, as in animals, a specific action on the digestive powers; a large dose producing vomiting, and perhaps inflammation and gangrene; a small dose excites the action of the alimentary canal, and produces abundant liquid stools. But when administered in fractional parts, and with care, it neither produces the colic nor hypercatharsis, of which it has been accused. It has therefore been

given successfuly in dropsies, in torpor from constitutional inactivity of the bowels, in melancholy and gouty systems, and in various chronic diseases; also as a vermifuge. Hechsetter, Lister, Werloff, Spindler, and Wichmann, &c. have used it with success, in ascites, anasarca, croup, spasmodic hiccough. By others it has been used in jaundice, intermittent fevers, and above all, recommended strenuously as a remedy for worms, lumbrici, and ascarides. Barrere says, the external application removes pains, has also cured ulcers of an ill conditioned character, topically used. Gmelin's experiments, however, on dogs, show this should be cautiously done. Dose, from 2 to 5 or 6 grains. Reichenbach, and Neffer, used it as a specific for worms; and it forms the anthelmintic ether of spielman. Is an ill pelv used for dropsies, and in many pharmaceutical compounds.

Offic. Prep. *Pilulæ Conchagiæ compositæ.* L. E.

No. 510.—Stannum. Tin.

Cabinet specimen, Jeff. Coll. No. 689.

The powder and filings are officinal by the European Colleges, and the U. S. I never met with any one who had used either.

No. 511.—Staphisagriæ Semina. Yield *Delphia.*

See Nos. 225 and 226.

No. 512.—Statice Caroliniana. Marsh Rosemary.

Cabinet specimen, Jeff. Coll. No. 690.

Indigenous; the root officinal by Pharm. U. S. It should be further tried—I recommend it for experiment, to candidates.

No. 513.—Strychnos nux-vomica. Vomic-nut or Poison-nut.

Cl. *Pentandria.* Ord. *Monogynia.* Nat. ord. *Solanaceæ.*

Synonym.—*Nux-vomica officinarum.* (Bauh.)

Cabinet specimen, Jeff. Coll. No. 691—figure No. 692.

A large tree; fruit an oval round, smooth, pulpy berry, containing round flattened seeds, about ¾ of an inch in diameter, three sixteenths of an inch thick, covered with pubescent radiated hairs—berry the size of an orange. Native of the East Indies.

The roots and the wood of this tree are very bitter. Rheed first described, and figured this tree, in the Hortus Malabaricus, under the name of *Caniram.*

The seeds, known by the name of *Nux-vomica*, have been very long know in commerce, and in the Materia Medica, as a deleterious poison. Messrs Bracconnot, Desportes, Chevreul, and others, have chemically analyzed them. The last found them to contain, 1. a gum, 2. a peculiar matter of an animal nature, 3. an intense bitter principle, 4. a fixed oil, and 5. a coloring yellow matter: and that the poisonous qualities of the seed are owing to its bitter principle.

Qualities. The Arabs first introduced these seeds into the Materia Medica, and knew their violent action on the animal system. Their accounts were proved, by the experience of Mathiole, Fred. Hoffman, Wepfer, Conrad Gesner, Linnæus, Brunner, Lossin, De Hyde, Scutter, Sorbais, and more recently by Desportes, Magendie, Delisle, Orfila, and others. They have found these seeds noxious to man, to dogs, cats, wolves, foxes, rabbits, weazels, fowls, rocks, and frogs. In a shorter or longer time, often in 15 minutes, these animals were generally or partially convulsed; and the members and trunk tetanically affected; sometimes a suspension of the action of the senses, extreme anxiety, and almost always death. The last effect took place equally, whether the *nux-vomica* was given directly in substance, decoction, infusion, or extract; or whether injected in the rectum, into the cellular texture, or other channels. Wepfer found in the stomachs of animals killed with it, and in their intestines, gangrenous inflammation. All others, who have observed its effects, have found no traces of inflammation or corrosion of the organ, to which the poison was applied; and consequently, it is certain, that it is immediately absorbed, and carried to the nervous system, and particularly the spinal marrow, and there inflicts its destruction. Vomits given immediately, rejected the *nux-vomica*, and prevented the poisonous effects. When the poison has been absorbed, there does not appear any cure, although acids and spirits have been recommended. Loureiro relates, that a horse died in 4 hours, after taking a drachm of the seed in a half roasted state. Hoffman says, 15 grains killed a child ten years old. A scruple kills a dog; a rabbit was killed by 5, and a cat by 4 grains. Loss however states, that he took 9 grains without injury, and that a friend of his swallowed a whole seed with impunity: the latter must have been deprived, by some process, of its power.

Medical Properties and Uses. Notwithstanding its virulence, under cautious use, this poison has done much good in affections arising from, or accompanied by diseases of the nervous system. It has been used in Sweden, in dysentery; but Bergius's accounts of its effects in this disease

are not encouraging. Loureiro recommends it, in fluor albus, by torrifying it to such an extent, that it becomes black; which he says renders it safe, and does not destroy its medicinal virtues. Murray relates, that Ludovic, Widél, Buchner, and Hartman, have cured intermittents with it. Schulz used it in extract, for worms; and Junghans in alcoholic tincture, for the same purpose. It has been used in mania, hypochondria, hydrophobia, hysteria. It has done most good in paralysis, hæmiplegia, chorea Fouquier thus used it in doses of 2 grains, 2 or 3 times a day.

No. 514.—Styrchna.

Cabinet specimen, Jeff. Coll. No. 693.

Strychnine is obtained from—

1. *Strychnos.* Nux-vomica.
2. *Strychnos Ignasii*, or St. Ignatius's Bean.
3. *Strychnos Colubrinium*, or Snake wood.
4. *Upas*, or Java poison.

Mode of preparation.—A solution of liquid sub-acetate of lead, is added to a solution of alcoholic extract of nux-vomica, in water, until no more precipitate is thrown down: the strychnine remains in solution, with a portion of colouring matter, and occasionally an excess of acetate of lead. This is separated by sulphuretted hydrogen, filtered, and boiled with magnesia. The latter unites with the acetic acid and throws down the strychnine, the precipitate is impure. It is now to be washed in cold water; re-dissolved in alcohol, to separate the remaining magnesia: evaporate the alcohol, and the pure strychnine is obtained. In the native state, the strychnine is supposed to be in union with a new acid, called by Caventou and Pelletier, Igasuric acid, from the Malay name of the St. Ignatius's Bean. It is scarcely soluble in cold water, requiring, at 50° F. 6667 parts to dissolve it; boiling water dissolves little more than double; soluble, therefore, in 2500 parts of boiling water; a solution in cold water, of strychnine, containing consequently one 6667th part of its weight, may be diluted by 100 parts or times its volume of water, and still retain an evident bitter taste. The chief character of Strychnine, is its forming neutral salts, when united with acids. Pelletier thinks the nux-vomica contains 2 alkaline substances; one strychnine, the other Brucine, which had been previously obtained from the Angustura spuria, or Brucea antidysenterica. The presence of Brucine is not material, in the strychnine, since the effects of both are similar on the system, the Brucine being less active. Henry, Pharmacien of France, proposes

another method of extracting strychnine, by boiling nux-vomica in water, and evaporating the decoction to a syrup; adding lime, which unites with the acid, and frees the strychnine; alcohol is then used to separate the strychnine from the lime; and when the alcoholic solution is evaporated, strychnine is obtained; it is rendered purer by a re-dissolution in alcohol, and crystallization.

Qualities similar to nux-vomica, but more intense; one-eighth of a grain kills a large dog, and ¼ of a grain produces marked effects on the human system. Has been used in the same cases as nux-vomica.

Formulæ—

Pills of one-twelfth, or one-eighth of a grain—

Pure Strychnine,	2 grains	} Mix.
Cons. Roses.	½ drachm	}

Divide into 24 equal pills.

Tincture Strychnine—

Alcohol,	℥j	} Mix.
Strychnine.	3 grains	}

Dose, from 6 to 15, or 25 drops, in mixture or drink.

Mixture of Strychnine—

Distilled water,	℥ij	} Mix.
Pure Strychnine,	1 grain	}
White Sugar,	2 drachms	}

A desert spoonful, to be taken morning and evening.

No. 515.—Styrax.

Cl. 10. Ord. 1. *Decandria Monogynia.* Nat. ord. *Bicornes,* Linn. *Guaiacinæ,* Juss.

Species 1—STYRAX OFFICINALE. Officinal Styrax.

Officinal. *Styracis Balsamum.* L. *Styracis Benzoini Balsamum.* Edin. *Styrax calamitæ; resina.* Dub. Storax Balsam.

Cabinet specimen, Jeff. Coll. No. 694—figure, No. 695.

Native of the Levant and South of Europe. The Storax is fragrant, acidulous, slightly pungent, and aromatic to the taste—is a stimulant. Dose, grs. x to ℥ss.

Allingia excelsa, Rosa mala yields, it is supposed, the true Balsam, called liquid storax.

Offic. Prep. *Styrax purificata.* D. *Pilulæ e Styrace.* D.

Species 2—STYRAX BENZOIN. Benjamin tree.

Cabinet specimen Jeff. Coll. No. 696—figure, No. 697.

Officinal. *Benzoinum*, Lond. *Styracis officinalis; Balsamum*, Edin. *Benzoe; Resina*, Dub. Benzoin—a Balsam. *Styrax Benzoin; Balsamum*—the Balsam. U. S.

A native of Sumatra, and the East Indies. Two sorts Benzoin in India; the finer and dearer of which the Tamools call *Malacca Sumbranie*: it is the *head benzoin* of commerce; the other kind they call Sambranie, which is *pool benzoin*, sometimes called *Caffre's beard*. Finest kind very fragrant; little or no taste—white or yellowish, sometimes translucent and brittle; obtained by wounding the tree near the origin of lower branches—the other is an inferior sort, a brownish colour, harder, and mixed with impurities. This balsam is brought to India from Sumatra; it is also produced in Siam, Loos, and Java. The inferior kind burnt by Malays and Arabs, to perfume temples and houses. The Hindoos, particularly the Tamools, use it in doses of from 4 to 15 grains, in consumption and asthma.

Offic. Prep. *Acidum Benzoinum*. L. E. D. & U. S. *Tinctura Benzoini*. L. E. D.

No. 516.—Succinum. Amber.

For fine Specimens, see Professor Green's Cabinet, Jeff. Coll.

Officinal—*Succinum* of the Colleges.

Offic. Prep. *Acidum succinum*. E. D. *Oleum Succini*. L. E. D. Never used in the U. S. probably because it is so dear, and so rarely to be had pure—a factitious oil of amber is usually sold and prescribed. I never used either, and know nothing, from experience, on the subject.

No. 517.—Sulphur sublimatum, of the Colleges, Flowers of Sulphur.

Cabinet specimen, Jeff. Coll. No. 698.

A well known laxative diaphoretic, used in cutaneous affections; it renders the patient intolerably offensive. I once had a gun-boat full of men, at Norfolk, with itch, whom I had separated from the crew of the frigate United States, and for whom I directed the sulphur ointment—the stench of their bodies was horrible.

Offic. Prep. *Sulphur lotum*. L. E. D. Cabinet specimen, Jeff. Coll. No. 699 *Sulphur præcipitatum*. L. *Unguentum Sulphuris*. L. E. D. & U. S. *Unguentum Sulphuris comp*. L. & U. S.

No. 518.—Sweet Fern, or Sweet Ferry—the *Comptonia Asplenifolia*—an amentaceous terebinthinate plant.

Cabinet specimen, Jeff. Coll. No. 700--figure, No. 701.

Indigenous. For a detailed account, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. II.

No. 519.—SWIETENIA FEBRIFUGA. Febrifuge Swietenia.

Cabinet specimen, Jeff. Coll. No. 702—figure, No. 703.

The bark is officinal by the Dublin College. Tonic and febrifuge in dose ʒss. The Cabinet specimen was given me, by the late Professor Barton.

No. 520.—SYMPLOCARPUS FŒTIDA. Skunk Cabbage.

Cabinet specimen, Jeff. Coll. Nos. 704 and 705—figure, No. 706.

Indigenous—antispasmodic. For a detailed account, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. I.

T.

No. 521.—TABACI FOLIA. The leaves of Tobacco. See Nos. 397 and 398.

No. 522.—TAMARINDUS INDICA. The Tamarind tree.

Cabinet Specimen, Jeff. Coll. No. 707—figure, No. 708.

No. 523.—TANACETUM VULGARE. Tansey.

Cabinet specimen, Jeff. Coll. Nos. 709 and 710—figure, No. 711.

One of the corymbiferæ yields an essential oil; the leaves are very bitter, and said to be anthelmintic.

No. 524.—TAPIOCA. See No. 323.

No. 525.—TEREBINTHINA and TEREBINTHINÆ OLEUM. See No. 424.

No. 526.—TEUCRIUM CHAMÆDRYS. Wall Germander.

Cabinet specimen, Jeff. Coll. No 712—figure, No. 713.

Officinal by the Dublin College—being tonic and diuretic.

Species 2—TEUCRIUM MARUM. Common Marum, (in Europe.)

Cabinet specimen. Jeff. Coll. figure, No. 714

Officinal by the Dublin College.

An aromatic errhine, without narcotic power, enters into the *Pulvis Asari compositus* of E. D.

TIGLII OLEUM. Croton Oil. See No. 200.

No. 527.—THUJA QUADRIVALVIS
——— ARTICULATA.

Yield gum Sandarach; though the *Juniperus oxycedrus* is usually supposed to produce it.

No. 528.—TOLU. The Balsam of *Toluifera Balsamum.*

Cabinet specimen, Jeff. Coll. No. 715.

No. 529.—TORMENTILLA ERECTA. Common Tormentil, (in Europe,) or Septfoil.

Cabinet specimen, Jeff. Coll. No. 716—figure of the root, No. 716*.

The root officinal, by L. E. D. Colleges—astringent—not used in the United States.

No. 530.—TRIOSTEUM PERFOLIATUM. Fever Wort.

Cabinet specimen, Jeff. Coll. No. 717—figure of the plant, No. 718.

Indigenous—for a detailed account, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. I.

No. 531.—TUSSILAGO FARFARA. Common Coltsfoot, (in Europe.)

Cabinet specimen, Jeff. Coll. figure, No. 719.

The leaves and flowers officinal, by the L. E. D. Colleges—not used in the United States.

V.

No. 532.—VALERIANA OFFICINALIS. Officinal, or Great Wild Valerian.

Cabinet specimen, Jeff. Coll. No. 720—figure of the root, No. 721.

Cl. 3. Ord. 1. *Triandria Monogynia.* Nat. ord. *Aggregata Dipsaceæ*, Juss.

Radix. The root officinal, by the Colleges of Europe and United States. A native of Europe.

QUALITIES. Strong peculiar unpleasant odour—warm bitterish sub-acrid taste. By Trommsdorff's analysis, contains a greenish white liquid volatile oil, on which its virtues depend: and which, from its odour and taste, contains camphor, sp. gr. at 77° F. 0.9540; exposed to light, becomes yellow—a small portion of nitric acid converts

it into resin, and a larger one into oxalic acid. The expressed juice of the root contains starch, extractive, and gum—while the roots, deprived of this juice, yield a portion of *black-coloured resin, but consist chiefly of woody* fibre. The active property of the root, is extracted by alcohol, boiling water, and solutions of the pure alkalies.

Medical Properties and Uses. Antispasmodic, and supposed emmenagogue—given in hysteria, epilepsy, hemicrania, and other neuroses. In hypochondriasis, may be given in substance, combined with aromatics. Dose, of the powdered root, ℈j to ʒj, 3 or 4 times a day.

Offic. Prep. *Extractum Valerianæ.* D. (a bad preparation.) *Infusum Valerianæ.* D. & U. S. *Tinctura Valerianæ.* L. D. & U. S. *Tinctura Valerianæ ammoniata.* L. E. D. & U. S.

No. 533.—Veratrum album. White Hellebore, or Veratrum.

Synonyms—Helleborus albus. Pharm. Lond. & Edin.

Cl. 23. Ord. 1. *Polygamia Monoecia.* Nat. ord. *Coronariæ,* Linn. *Junci,* Juss.

Cabinet specimen, Jeff. Coll. No. 722—figure of the root, No. 723.

Radix. The root officinal, by the Colleges.

Supposed to be the Ελλέβορος λευκος of the Greek writers.

Qualities. Roots and every part of the plant, very acrid and poisonous. According to Pallas, Kalm, and Gmmer, leaves and seed deleterious to animals. The dried root has no peculiar smell; but a durable, nauseous, acrid bitterish taste, burning the mouth and fauces—applied to ulcers and wounds, or issues, produces gripeing and purging—is a powerful sternutatory. According to Gesner, 2 drachms of an infusion, made of half an ounce of the root, to 2 ounces of water, produced great heat about the scapulæ, and in the face and head, tongue and throat, followed by *singultus;* and finally, violent vomiting. Bergius experienced distressing symptoms, by only tasting the infusion. In large doses, produces bloody stools—acts powerfully on the nervous system, producing great anxiety, tremors, vertigo, aphonia, interrupted respiration, sinking of the pulse, convulsions, spasms, cold sweats, and death. *Post mortem* examinations, show inflammation of the stomach, with corrosions of the internal coat—lungs inflamed, and filled with dark blood. (See Albert, Jurisprudence Medical, vol. vi. p. 718.) Contains *Veratria.*

Medical Properties and Uses. The ancients used it in obstinate chronic diseases—in mania, melancholia, dropsy,

elephantiasis, epilepsy, lepra, rabies canina, &c.: and considered it safest, when it vomited—deemed it unsafe for weak constitutions, for women, children, old men, and pulmonary patients—observed it cure, even when it did not affect the primæ viæ. Has been used in later times, advantageously, in mania, in doses of 2 or 3 grains of the extract. Gesner used it as an alterative, with great success. Greeding tried it in 28 cases of mania and melancholy—cured 5—relieved many more, and on the others it had no effect. He used the bark of the root—1 grain; and increased, according to its effects—some required 8 grains, or even ℈j. He also used Stoerck's extract. In almost every case, it acted on all the excretions. A florid redness was produced on the face, and cutaneous efflorescences on the body; in some, pleuritic symptoms were produced, with fever, which required bleeding—critical evacuations also, with profuse sweating, increase of saliva, and mucous secretions. Uterine obstructions, of long continuance, were removed by it. Has been found useful in epilepsy—most useful in scabies, herpes, lepra, &c.; used externally, as well as internally. Finally, it is a poison, in overdose—a powerful and stimulating irritant, in a proper dose.

Is not a native of this country, as stated in Coxe's Dispensatory.

Veratrum is derived from *verare*, i. e. *vera loqui*, because it turns the mind to a sane from an insane state.

Offic. Prep. *Decoctum Veratri.* L. & U. S. *Tinctura Veratri albi.* E. *Unguentum Veratri.* L. *Unguentum Sulph. comp.* L.

No. 534.—Veratrum viride. Green Hellebore.

Cabinet specimen, Jeff. Coll. No. 724—figure of the root, No. 725.

The root officinal, by the Pharm. U. S., which directs an ointment and a tincture of it. See Bigelow's Med. Bot.

No. 535.—Veratria. *Veratrine.*

Cabinet specimen, Jeff. Coll. No. 726.

The alkaline proximate principle of *Veratrum sabadilla*, and *Colchicum autumnale*, obtained by the analysis of MM. Pelletier and Caventou. Their analysis of sabadilla furnished—1. A fatty compound, composed of oil, adipocire, and cevadic acid; 2. Wax; 3. Yellow extractive colouring matter; 4. *Veratrine*, forming with gallic acid an acid salt; 5. Gum; 6. Woody fibre. The ashes, which were in small quantity, were almost wholly composed of the carbonate and phosphate of lime, with some traces of the hydrosulphate

and carbonate of potass, and silica. Meissner, however, gives the most elaborate analysis of this substance: he found it to consist of—Fixed oil 24.2; adipocire 0.43; wax 0.1; resin, soluble in ether, 1.45; resin, insoluble in ether, 8.43; *veratrine* 0.48; bitter extractive, with an undefined acid, 5.97; sweet extractive 0.65; gum 4.82; oxygenated extractive (ultrine ?) which may be extracted by potass, 24.14; woody fibre 20.56; phyteumacolle with hydrochlorate of potass, and a vegetable salt with a base of potass, 1.21; oxalate of lime with bassorine 1.06; water 6.4.

The root of the *veratrum album* or *commune* yields; 1. A fatty matter composed of oil, adipocire, and an acid similar to the cevadic, but incrystallizable; 2. Yellow extractive colouring matter: 3. Acid galate of *veratrine;* 4. Gum; 5. Fecula; 6. Woody fibre. The ashes contain carbonates of potass and lime, sulphate of lime and silica.

Pelletier and Caventou.

Qualities. Scarcely soluble in cold water—boiling water dissolves one thousandth of its weight, becoming sensibly acrid—very soluble in ether—more so in alcohol—soluble in all vegetable acids, which it saturates, and forms with them incrystallizable salts, which, on evaporation, resemble gum—the sulphate alone affords rudiments of crystals, when its acid is in excess—insoluble in alkalies—restores the blue of turnsole paper rubified by acids. Liquefies by heat of 122° F. resembling wax; on cooling, forms a translucent mass, resembling somewhat the appearance of amber. A dose of $\frac{1}{4}$ of a grain, produces copious alvine discharges. If the dose be increased, more or less violent vomiting ensues. Little is known of its powers and effects, and it should be further tried. I recommend it for an inaugural thesis.

No. 536.—Veronica Beccabunga. Broad-leaved Brooklime.

Cabinet specimen, figure, No. 727.

Indigenous—out of use.

No. 537.—Viola odorata. Sweet Violet.

Cabinet specimen, Jeff. Coll. No. 728—figure of the plant, No. 729.

Yields the flowers—officinal by the London and Dublin Colleges; and from which the *Syrupus Violæ* of E. D. is obtained.

No. 538.—Violina. Violine.

An alkaline bitter acrid principle, similar to emeta, obtained by M. Boullay, from the roots, leaves, flowers, and seeds.

of the preceding. It is probable, that the emetic viola, which forms a part of ipecacuanha, contains it. Orfila says it is highly poisonous. This is a good subject for a thesis. We have numerous indigenous species, which I have always thought, from their sensible properties, and from the family to which they belong, active plants. The *viola pedata*—one of these, is officinal in the Pharm. U. S.

No. 539.—Viscum. Misletoe.

A poetic plant—interesting from its Druidical history—good for nothing in medicine.

Cabinet specimen, Jeff. Coll. No. 730.

No. 540.—Vinum vinifera. Common Vine.

Cabinet specimen, Jeff. Coll. figure, No. 731.

The raisins, called *uvæ passæ*, are officinal, and used in pharmacy, in making some preparations—every body knows what the fresh fruit produces. The officinal wine is the sherry, or *Vinum album Hispanum*. Edin. Used in making officinal wines.

U.

No. 541.—Ulmus fulva. Slippery elm.

Cl. 5. Ord. 2. *Pentandria Digynia*. Nat. ord. *Scabridæ*, Linn. *Amentaceæ*, Juss.

Cabinet specimen, Jeff. Col. No. 732, and No. 733—figure, No. 734.

Officinal. *Liber*—the inner bark. Phar. U. S.

The elm bark is made up of mucilage, and in infusion, which is aromatic, constitutes a more agreeable lubricating ptisan, than any article I know. I have used it a great deal in dysentery—it is nutritious. The powder, moistened with water, is an excellent application to excoriated nipples; and it never causes the babe to reject the breast.

Yields *Ulmia.*

Decoctum Ulmi comp.

Formula. ℞

Decocti ulmi,	Oviij
Ligni Sassafras, et	
—— Guaiaci,	āā ℥j
Corticis Mezerei,	℥ij
Radicis Glycyrrh.	℥j

Boil for half an hour, and decant. Dose, half a pint, or a pint, daily. *Henry Jeffreys.* Recommended in syphilitic eruptions, and rheumatic pains, connected with that taint. T. T. H. (MS.)

No. 542.—Ulmia. Ulmin.

A spontaneous exudation, from the preceding and other elm trees. Berzelius hints, that it probably is a component of

every bark. It is solid, black, hard, shining, insipid—soluble in water, but does not form mucilage—insoluble in alcohol—precipitated by nitric and oxymuriatic acids, in the state of resin.

No. 543.—UPAS ANTIAR. The celebrated Upas tree—the poison of the East Indies, about which so much fable existed, prior to the investigations of our countryman, Dr. Horsefield, of Java.

W.

No. 544.—WINTERA AROMATICA. Winter's Bark tree.

Cl. 13. Ord. 4. *Polyandria Tetragynia.* Nat. ord. *Magnoliæ*, Juss.

Cabinet specimen, Jeff. Coll. No. 735.

OFFICINAL. *Winteræ aromaticæ, Cortex.* Edin. *Wintera aromatica, Cortex* U. S. *Winter's* Bark.

Native of the straits of Magellan—a large evergreen tree—discovered in 1577, by Captain Winter, whose name it bears; very rare—scarcely ever met with in the shops.

QUALITIES. Aromatic odour—pungent, hot, spicy taste, slowly imparted, but very permanent—contains a volatile oil, on which its properties depend; it may be obtained by distillation in water.

MEDICAL PROPERTIES AND USES. A warm aromatic, adapted to every purpose in which such a medicine is proper—has been used in scurvy, and combined with simple bitters in dyspepsia—resembles *canella alba*, with which it is confounded.

No. 545.—WOORARA.

A poisonous substance, produced, according to the opinion of Bancroft, by a species of *Liane*—it differs little from the *Ticunas.* (See No. 313.) It is used by the Indians of Guyana, to poison their arrows.

X.

No. 546.—XANTHORRHIZA APIIFOLIA. Parsley-leaved Yellow-root.

Cabinet specimen, Jeff. Coll. No. 736—figure, No. 737.

Officinal by Phar. U. S. The root.

Indigenous. A pure bitter tonic. For a detailed account, see W. P. C. Barton's Veg. Mat. Med. U. S. Vol. II plate 46.

No. 547.—XANTHOXYLUM FRAXINEUM. Prickley Ash.

Cabinet specimens, Jeff. Coll. Nos. 738 and 739—figure, No. 740.

The root officinal by the Phar. U. S. A good subject for an inaugural dissertation.

Z.

No. 548.—ZINCUM OXYDUM. L. E. D. Oxide of Zinc—(flowers of Zinc.)

Cabinet specimen, Jeff. Coll. No. 741.

Used, besides internally, *externally*, as a mild astringent in the unguent. zinci. "Dr. Rodolf of Magdeburg, has discovered the presence of arsenic in this preparation; by boiling the substance in distilled water, and assaying the solution with the ammon aco-nitrate of silver, its presence may be instantly recognised; chalk may be detected by sulphuric acid producing effervescence; and white lead, by its forming an insoluble sulphate of lead. It ought to be volatile."—*Paris.*

MEDICAL PROPERTIES AND USES. A tonic—used in epilepsy, chorea, and other neuroses. Dr. Chapman desires to claim the original practice of giving large doses of this medicine. He observes, "it has, at least in my hands, been of little use, till the quantity was increased to 15 or 20 grains, several times in the day. I have more than once given a dracam of it, in 24 hours. The only disagreeable effect from such a quantity, is nausea, which, however, is not of a distressing nature. We may safely commence with a dose of 4 or 5 grains"—and in a note immediately following, he continues: "exactly this course, I find to be recommended in a late English work of merit—Bedingfield's Medical Practice. As regards myself, it is, however, known to be original, having publicly taught and pursued the practice, long before the appearance of that work."*

The following is an extract from Cooke on nervous diseases, the American ed. of whose work was published in 1824.—

"Dr. Hart, in his inaugural dissertation, speaks very highly of the use of the flores zinci, and adduces several instances in which it was found efficacious. Dr. Guthrie, in a letter to Dr. Duncan, mentions a most alarming case of epilepsy, in which the paroxysms returned four times in twenty-four hours, with wonderful violence, while each fit was accompanied by a most distressing tetanus. In this in-

* Therapeutics, article Carb. Zinc.

stance, Dr. Guthrie formed the resolution of giving the flowers of zinc, with what he calls an empiric boldness, ordering eight grains of that medicine the first day, with conserve of roses, and augmenting the dose by four grains every fourth day, till the thirty-second from the attack, when it amounted to two scruples, which the patient took consecutively for a month, at the end of which time every vestige of the disease disappeared. Although Dr. Guthrie thought it prudent to continue this large dose of the medicine so long, no disagreeable consequences attended its exhibition, except a trifling nausea towards the beginning, which soon went off. A celebrated surgeon of Edinburgh prescribed with advantage this medicine in a confirmed epilepsy, which had existed for ten years; and also in another, in which the fits were preceded by an aura epileptica. This medicine has also been recommended by Dr. Haygarth of Chester, and Dr. White of York. Dr. Cullen, however, has not found zinc useful in these cases; nor can I, from my own experience, speak in its favour in epilepsy, although I have found it beneficial in *chorea sancti Viti*, and other nervous diseases."

I now quote from the Thesaurus Medicaminum, published in London, in 1794, "by a member of the London College of Physicians," (Dr. Duncan,) the following: "In the employment of the calyx, or, as it is commonly called, the *flowers*, of zinc, the physicians on the continent have been more successful than those of our own country. According to their reports, these calses are not only serviceable in epilepsy, but likewise in several other spasmodic disorders, such as hysteria, chorea, whooping-cough. Amongst our own practitioners, Dr. Percival recommends the use of them in consumptions, asthma, and other affections of the lungs. The ordinary dose, is from one to ten or twelve grains; though Dr. Donald Monro says that he has seen them often given to the quantity of twenty and even thirty grains." It appears plainly, therefore, that Dr. Chapman is not entitled to the award of the "originality," he so emphatically claims against Dr. Bedingfield. The edition of the Thesaurus Medicaminum, from which the above is quoted, bears the London imprint of March, 1794, near 34 years ago.*

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* I feel myself bound to notice these points, because I am bound to teach the truth, on all the details of my subject, and because Dr. Chapman absolutely lays one under the necessity of noticing them, by his own voluntary presentation of himself before the profession, in connexion with claims to originality, which, as they are wholly without foundation in fact, it would be improper in me to suffer to pass unrectified. I believe it will not be deemed *original* with me to say, that an author always writes the better, and with more probability of being received as authority, by an intimate acquaintance with the subject he may select. Materia Medica is an exceedingly difficult one—none more so, in the whole scope of me-

No. 549.—Zincı Acetas. Acetate of Zinc.

Cabinet specimen, Jeff. Coll. No. 742.

A mild tonic and emetic, for the last effect, in dose of grs. vi. to viii.

No. 550.—Zincı sulphas. L. E. D. & U. S. Sulphate of Zinc, formerly White Vitriol.

Cabinet specimen, Jeff. Coll. Nos 743 and 744.

In crystals, which are 4-sided prisms, terminated by 4-sided pyramids—slightly efflorescent, of styptic, metallic, acidulous taste; consists of one proportional of oxide, and one of acid; its crystals 7 proportionals of water. Soluble in 2.5 times its weight of water, at 60° F. and in less than its own weight of boiling water—insoluble in alcohol.

Medical Properties and Uses. Tonic, astringent, (in large doses) emetic. Its last effect is prompt and vehement, and hence is used when poisons have been swallowed. Externally, is used in grs. x to f℥viij water—dose as emetic, grs. x to ℥ss, as a tonic and astringent, grs. i to ij. The white vitriol of commerce, generally contains the sulphates of copper and iron—should be purified for medical use.

Offic. Prep. *Liquor Alum. comp.* L. *Solutio Sulphatis Zinci.* E. *Solutio Acetatis Zinci.* E. *Tinct. Acetatis Zinci.* D.

Formula— ℞ Zinci sulphatis, grs. x
Myrrhæ, in pulv. trit. ℥iss
Confectionis Ros. q. s.

Make 20 pills—2 the dose, twice a day. Astringent.

No. 551.—Zincı carbonas impurus. Phar. U. S. Impure carbonate of Zinc—(called Calamine.)

Used only in the preparation of *Unguentum Zinci oxidi impuri.* U. S. (Turner's Cerate.)

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dical science—one on which, in order to write so as to be considered *authority* by the profession, requires great knowledge of the details, great observation, great truth in handling it—for it has been so well handled, that any one who attempts to claim to be original, will be sure to be caught and ensnared, ere he is aware of the mesh he has placed his foot upon. To my view, it is unworthy of an elevated post, to endeavour to sustain it by boastful unrealities, in *unpublished* discourse; but when a man in such a high post, voluntarily comes before the public, to *publish* on a subject with *avowed claims to originality*—it is still more unworthy of that elevation, to descend to any unfounded pretension. The work of any man who does this, on any subject, (because it always will betray injustice to others,) never can be received by the *profession*, as authority; however much it may be so received by *students*, whose generous confidence in their teachers, inclines them always to receive gratuitously, whatever is offered as novel or peculiar. That confidence should not, I think, be abused. I profess to have a keen sense of literary justice; and if the author, whose writings I have so freely canvassed, can show by facts, (not assertions,) that I have in aught done him injustice, I will with pleasure and alacrity acknowledge that injustice, in the next edition of this work, in ROMAN CAPITALS, that all may see how wrong I have been.

No. 552.—ZINGIBER OFFICINALE. (Roscoe and Jacquin) Officinal Ginger.

Synonym—Amomum Zingiber. (Willd.)

Cabinet specimens, Jeff. Coll. Nos. 745 and 746—figure, No. 747.

OFFICINAL. *Zingiberis Radix.* Lond. *Amomi Zingiberis Radix.* Edin. *Zingiber, Radix condita.* Dub. Ginger root, dried and preserved.

Native of the East and West Indies—in the East it is particularly plenty, in the mountainous district of *Gingi*, to the east of Pondicherry—whence its name.

QUALITIES. Well known—is an aromatic, warm stimulant; the best perhaps we have used in flatulent colics, dyspepsia, gouty affections of the stomach, &c. Is a salivant masticatory, and has been used for paralytic affections of the muscles of the tongue and fauces. Dose, in powder, grs. x to ℈j.

OFFIC. PREP. *Syrupus Zingiberis.* L. E. D. & U. S. *Tinctura Zingiberis.* L. D. *Syrupus Rhami.* L. *Tinctura Cinnamomi comp.* L. *Acid. sulphur. aromat.* E. *Confectio Opii.* L. *Confectio Scammonii.* L. D. & U. S. *Infusum Sennæ.* L. *Pulvis Cinnamomi comp.* L. E. D. *Pulv. Scammonii comp.* L. D. *Pulv. Sennæ comp.* L. *Pilulæ Scillæ comp.* L. *Pilulæ Aloes.* D. *Vinum Aloes.* L. E. D. &. U. S.

The following plants have been omitted in their proper literal places:—

HYDRASTIS CANADENSIS. Yellow root. Indigenous. Cabinet specimen, Jeff. Coll. No. 748—figure of plant, No. 749. See W. P. C. Barton's Veg. Mat. Med. U. S. Vol. II. plate 26.

HEUCHERA AMERICANA. Alum root. Indigenous. Cabinet specimen, Jeff. Coll. No. 750—figure of plant, No. 751. Astringent. See W. P. C. Barton's Veg. Mat. Med. U. S. Vol. II. plate 40, for full account.

PANAX QUINQUEFOLIUM. Ginseng—Gensang. Cabinet specimens, Jeff. Coll. Nos. 752, 753, 754—figure of plant, No. 755. See W. P. C. Barton's Veg. Mat. Med. U. S. Vol. II. plate 45, for a full account.

PYNCKNEYA PUBENS. Georgia Bark—North American Cinchona. Cabinet specimen, Jeff. Coll. Nos. 756 and No. 757—figure of tree, No. 758. See W. P. C. Barton's Fl. N. Amer. Vol. I. plate 7, for a full account.

THE END.

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APPENDIX.

FORMULA FOR THE PREPARATION OF MORPHIA. By E. Staples. (To which reference has been made, page 228 of this vol.)

Four ounces of dried and coarsely powdered opium, to be submitted to the action of two ounces of pure pyroligneous acid, diluted with two or three ounces of pure water, for twenty-four hours, to be repeatedly stirred during the time; to this add twenty ounces of alcohol of 35 Beaumé; suffer this to digest another twenty-four hours, then immerse the vessel which contains it in water, and gradually raise the temperature to 160° Fahrenheit; pour the liquor thus heated upon a coarse linen or flannel strainer, and press it through while hot; after cooling, the liquor should be filtered through the paper used by apothecaries for the purpose. To this highly coloured acidulous tincture, add, at different times, cautiously, so that no apparent disturbance takes place in it, a solution of ammonia in alcohol, prepared as follows: three ounces of the strongest ammoniated alcohol, diluted with six ounces of alcohol of 35 Beaumé; about one ounce of this may be poured in at a time, in a gradual manner, and the rest added at regular intervals. In a short time, the Morphia will begin to precipitate in a crystalline form, and of a nankeen colour; by washing this precipitate in a small portion of water, and dissolving it in boiling alcohol of 35 Beaumé, it may be obtained perfectly pure, and nearly white.

By distilling the alcohol from the solvent, which should be done in a water bath, and suffering it to cool at different points of the distillation, further crystals of Morphia may be obtained. The residue may now be evaporated, and the *Extractum Opii Morphia privatum* be formed. This process will yield upwards of five drachms to the pound of opium.

Test.—Nitric acid, strong, changes Morphia to bright-red—Tinct. galls as test. Sulphuric acid, when strong, and added in excess, changes Morphia and salts to a permanent claret hue.

The above simple process, devised by Mr. Edward Staples, he informs me, can be accomplished by a *nurse's lamp*. I have seen all his preparations of opium—they are very beautiful. He has paid much attention to this subject, and his results prove with how much skill, talent, and effect. I think I can safely promise, from my knowledge of this gentleman, that the result of his present investigations will prove important to the profession, and highly creditable to himself.

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